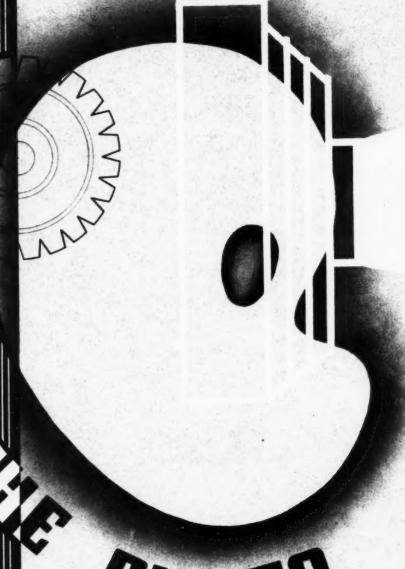
APRIL 1937



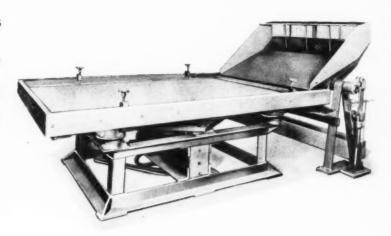
PHOTO

LITHOGRAPHER

APPROVED

BY THE LEADERS!

The list of CURRENT satisfied users of the ZENITH — the only gearless, single eccentric graining machine made — reads like a "Who's Who" in lithography. With one voice the leaders of the industry acclaim this peerless machine.



• Many exclusive construction features have contributed to ZENITH'S Number One position in the lithographic industry. No noisy grinding gears — a single eccentric and self-aligning ball bearing that reduces wear 80%. Hydraulic marble lift is ZENITH'S latest exclusive feature. Replaces old marble graining baskets on all ZENITH grainers.

REBUILT OFFSET PRESSES

• Zarkin Machine Company's new, up-to-date quarters are the scene of craftsmanship unmatched in the lithographic equipment industry. The same expert skill that turns out the widely heralded ZENITH grainer and whirler is also at your disposal in the rebuilding of lithographic presses. There is no compromise with quality at the home of ZENITH equipment, Visit our workshops when you are in New York.

Literature on ZENITH equipment and rebuilt presses available on request.

ZARKIN MACHINE COMPANY, INC.

335 East 27th Street

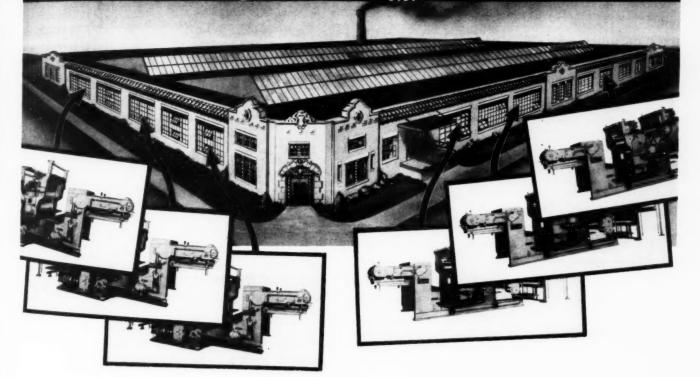
NEW YORK, N. Y.

Manufacturers of ZENITH . . The Only Gearless Single Eccentric Graining Machine



ERN PLANT of Epsen Lithographing Company

Uses HOE Super-Offset PRESSES



The popularity of presswork by Epsen... creative stylists of lithography... has necessitated enlargement and modernization of the plant at Omaha, Nebraska. The new building shown here with an architect's drawing will be completed early next month.

Behind the walls of this handsome mid-western plant will be six Hoe Super-Offset Presses...three two-color and three single-color models. Thereafter most of the multi-color work with which Epsen has won such an enviable reputation will be printed on Hoe Super-Offset Presses.

Hoe is proud of its mechanical contribution to the pressroom of Epsen Lithographing Company... and pleased with this recognition of Hoe's superior press design and construction by a progressive and successful lithographer.

R. HOE & CO., Inc. General Offices: 910 E. 138th St. (at East River) NEW YORK CITY
BOSTON SAN FRANCISCO CHICAGO BIRMINGHAM LONDON

OR best results in photo-lithographic work, exacting craftsmen everywhere are showing increasing preference toward Agfa Reproduction Materials. The extra margin of quality insured by precision methods of manufacture will prove to you the value of using best materials for best results.

REPROLITH ORTHOCHROMATIC FILM —

REPROLITH ORTHOCHROMATIC FILM – a highly color-sensitive, most versatile material of

a highly color-sensitive, most versatile material of maximum contrast and needle-point sharpness.

REPROLITH THIN BASE FILM — a special thin base (.004") material for camera negatives and contact positives.

REPROLITH FILM — an ideal medium of highest contrast for monochrome originals.

STAY-FLAT SOLUTION (Clear and Matte) — a special adhesive preparation for supporting film evenly and securely on glass. The "matte" form also provides a ground-glass effect for focusing.

MADE BY AGFA ANSCO CORPORATION IN BINGHAMTON, N. Y.

AGFA
REPRODUCTION
MATERIALS



THE

PHOTO-LITHOGRAPHER

Published in the Interests of Lithographers to Increase Sales Efficiency and Quality

LEWIS C. GANDY
ASSOCIATE EDITOR

WALTER E. SODERSTROM EDITOR

SAMUEL D. WOLFF ADVERTISING MANAGER

Volume V

APRIL, 1937

Number 4

Contents of This Issue

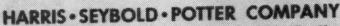
Some Problems Confronting the National Association of Photo-Lithographers														
Paul Heideke	13													
A CENTRALIZED PRODUCTION CONTROL SYSTEM														
THE SELLING OF PHOTO-OFFSET LITHOGRAPHY														
Photo-Lithographed Newspapers.														
Don't Forget Depreciation														
PLATE FINISHING OPERATIONS; PRESERVATION ON PRESS														
YOUR ACCOUNTANT AS A BUSINESS CONSULTANT														
BOOST YOUR BUSINESS	39													
THE MASKING METHOD OF COLOR REPRODUCTION	4 I													
Be Sure You Are Right	45													
Choosing the Right Color Scheme.	49													
	59													
Why Lithographic Abstracts	62													
LITHOGRAPHIC ABSTRACTS	63													

Official Organ of the National Association of Photo-Lithographers. Published by Walter E. Soderstrom, 1776 Broadway, New York, N. Y. ADVERTISING RATES: Advertising rates made known on application. Closing date for copy, fifteenth of the month previous to date of issue.

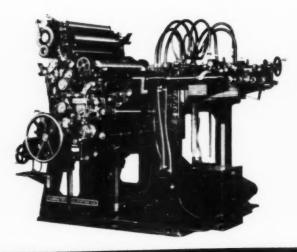
Subscription Rates: \$3.00 per year in the United States, \$4.00 per year in Canada. Single copies 30 cents.

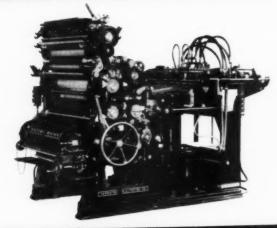
Acceptance under the Act of June 5, 1934. Authorized November 14, 1935.

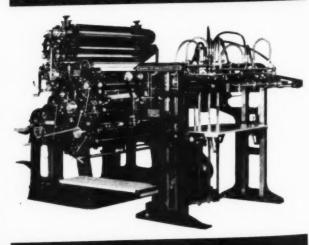
hishree of Group in landand Equip-Ceading Photo-Cithographers



General Offices: 4510 East 71st St., Cleveland, Ohio. Harrit Sales Offices: New York, 330 West 42nd St.; Chicago, 343 South Deachorn Street; Dayton, 813 Whahington St.; San Francisco, 420 Market St. Pactories: Cleveland, Dayton







HARRIS · OFFSET · PRESSES



Heavy Duty Dispenser and 2592" Roll Scotch Cellulose Tape (Transparent)

SCOTCH CELLULOSE TAPE for stripping and masking!

Thin, strong, easy to apply. Slight pressure seals it—no water required. Will not dry out, crack or curl. Easily removed, leaving no residue on film.



Scotch Cellulose Tape (Red) for masking out colors on negatives. For holding down opaque paper masks on large areas. For blocking out margins on negatives and for squaring halftones.

NOTE: Red Scotch Cellulose Tape is used by most lithographers in preference to Black Scotch Cellulose Tape for masking as it is photographically opaque and yet is transparent enough to the eye to see exactly what is being masked out. Also, Red contrasts with the color of the negative better than Black and is never overlooked on the negative after use.

Scotch Cellulose Tape (Transparent) for combining film negatives of type and illustrations and for holding negatives in position on glass or paper layouts.

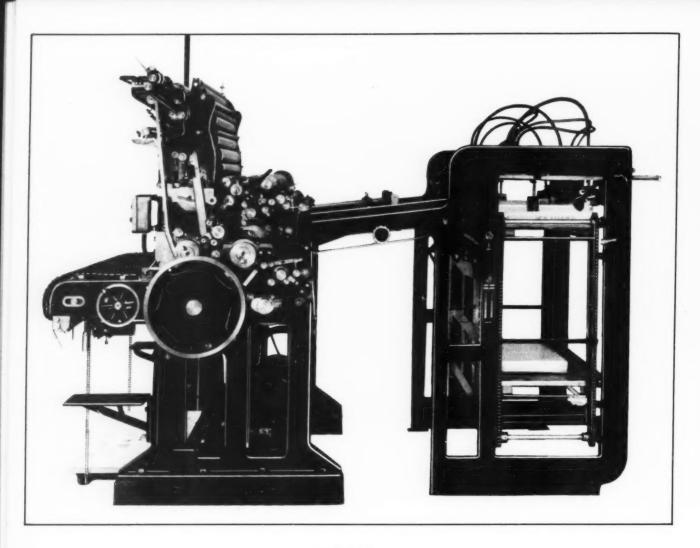
For combining carbon tissues in

gravure plate making. For holding overlays of glass or film in position.



MINNESOTA MINING & MFG. CO., St. Paul, Minn. GENTLEMEN: Please ship to me through my wholesaler the	items I have checked:
6 rolls, 1/2" x 2592" Red Scotch Cellulose Tape. \$8.64 1 Heavy Duty DispenserFREE	6 rolls, ½" x 2592" Transparent Scotch Cellulose Tape
2 rolls, ½ x 2592 Red Scotch Cellulose Tape \$2.88 \$4.28 1 Heavy Duty Dispenser	2 rolls, ½" x 2592" Transparent Scotch Cellulose Tape
Signed	Address
City and State (Rolls also available in $\frac{1}{4}$ ", $\frac{1}{4}$ ", $\frac{1}{4}$ ", and 1" widths x 2592". For prices	Your Wholesaler's Name

Made and Patented in U. S. A. by MINNESOTA MINING & MFG. CO., Saint Paul, Minnesota Under one or more of the following U. S. patents: Nos. 1357020, 1779588, 1814132, 1856986, 1895978, 1954805, 1959413, Re. Nos. 18742, 19128.



THE WILLARD OFFSET PRESS 22"x 30"

Exceptional
Accessibility

Extreme Simplicity Equipped with Dexter Feed and built-in Baldwin Press Washer

Precision Built

WILLARD MANUFACTURING CORPORATION

William Gegenheimer, President

28 WEST 23rd STREET

NEW YORK



The Happy Family - Photograph by Adolf Fassbender, F. R. P. S.

OUTSTANDING FOR FAITHFUL REPRODUCTIONS

MONTGOMERY OFFSET

PRE - HUMIDIFIED

OUTSTANDING QUALITIES!

- 1. Pure white shade especially adapted for multi-color work.
- 2. Good folding strength for multi-folds.
- 3. Excellent opacity.
- 4. Moisture content controlled.
- 5. Flat surface for letterpress printing.
- 6. Embosses well.
- 7. Free from lint, fuzz, grit or excessive alum.
- 8. Hard surface tub sized (i. e. surface sized).
- Cut one sheet at a time to eliminate torn sheets, color and finish variation.
- 10. Guaranteed for lithographing in sixteen colors.
- 11. Suitable for sheet fed gravure and water color printing.

Sold by

MARQUARDT & CO., INC.

Fine Papers

153-155 SPRING STREET

NEW YORK

Telephone: CAnal 6-4563

PROVEN BY TEST

SAMPLE BOOKS

UPON REQUEST

IULCAN

OFFSET BLANKETS and LITHOLASTIC INKING ROLLERS

Vulcan products are made under constant laboratory control. This includes supervision of raw materials. manufacturing operations, and the finished product. As a result, Vulcan products for Lithographers are uniform in quality, dependable, and economical.

A large majority of Lithographers are using Vulcan products and will substantiate the claims made for them.

Why don't you investigate Vulcan Offset Blankets and Litholastic Inking Rollers? Printed matter and names of users in your vicinity will be sent to you on request.

VULCAN PROOFING COMPANY

58th Street and First Avenue, Brooklyn, N. Y. 💿 608 South Dearborn Street, Chicago

Pacific Coast: Ralph E. Leber Co., Inc., Polson Bldg. Seattle, Wash. 🕥 Southern Repr. Hi-Speed Roller Company, New Orleans, La.





Smooth

In the pressroom Lexington offset gives smooth performance in every detail ... handles well because it is trimmed square and lays flat ... takes ink evenly and dries quickly because it is surface-sized ... gives faithful reproduction in monotone or color work. Available in White and India in standard finish and in White only in four fancy finishes. Growing in demand—convincing in performance!

INTERNATIONAL PAPER COMPANY 220 East 42nd Street, New York, N. Y. Branch Sales Offices: BOSTON • CHICAGO • CLEVELAND • PITTSBURGH FOR FAITHFUL REPRODUCTION EXINGSTON OFFSET An INTERNATIONAL PAPER COMPANY 220 East 42nd Street, New York, N. Y. Branch Sales Offices: BOSTON • CHICAGO • CLEVELAND • PITTSBURGH FOR FAITHFUL REPRODUCTION

ry

ls,

ls.

m

in

n.

d

S

EB



FOLDER: Produced for Hamburg-American Line (Reliance Cruise) by Charles Francis Press, New York, on *M-C Folding*.

HOUSE ORGAN: The Norwich Percolate, prepared for The Norwich Pharmacal Co., by Lawrence C. Gumbinner, New York. Printed by Commanday Roth Co., on *Catskill*.

INSERT: Produced for Forstmann Woolen Co. (Porosa), by The Stirling Press, New York, on Canfold.

BOOKLET: For Sarah Lawrence College, Bronxville. Designed by Martha McDowell. Printed by L. F. White Co., New York, on *Canfold*.

CATALOG: Produced for Mount Hope Cemetery Association by The Stirling Press, New York, on Ashokan.

BOOK: Production Yearbook (Annual). Produced by Davis,

Delaney & Harrs, New York, for The Colton Press, on M-C Folding.

BROADSIDE: "An Old Southern Custom," printed for The Ladies' Home Journal by The Curtis Publishing Company, Philadelphia, on *Canfold*.

BOX TOP: Designed by Lester Gaba for The Kerk Guild, (Shirley Temple Bath Drum). Printed by Thomas C. Peters Printing Co., Utica, N. Y., on Zena Litho C. 1 S.

LABEL: Produced by Mojac Press, Inc. for Crandall Pettee Co. (Fountain Specialties), on Lithogloss.

CALENDAR: Produced for Franklin Rayon Corporation by Universal Press, Inc., Providence, on M-C Folding White.

MAGAZINE: Graphic Arts Buyer. Printed by Guide Printing Co. of Brooklyn, on Zena.

THE MARTIN CANTINE COMPANY, SAUGERTIES, N.Y.

SPECIALISTS IN COATED PAPERS SINCE 1888

Cantine's Coated Papers

MERCK Ammonium Dichromates

FOR THE PHOTO-LITHOGRAPHER

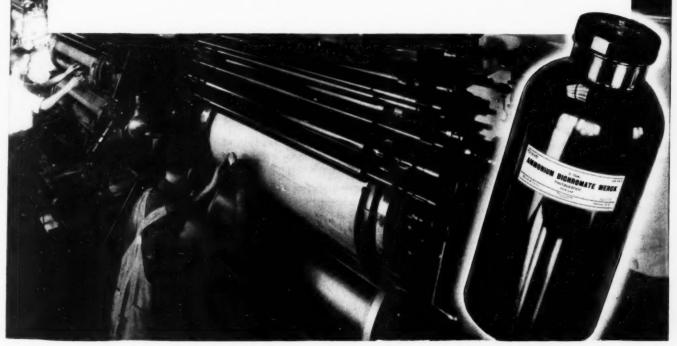
AMMONIUM DICHROMATE PHOTO-GRAPHIC GRANULAR This Merck product lends itself admirably to the special requirements of the photo-lithographer since it offers these three outstanding features:

- 1—Rapid Solubility—made possible by a readily dissolving form that permits maximum speed in preparing solutions.
- 2—Improved Granulation—a free flowing product which facilitates and simplifies weighing.
- 3—Rigid Laboratory Control—insuring a high degree of uniformity—absence of grit or dust

particles—and freedom from chemical impurities.

AMMONIUM DICHROMATE REAGENT Exhaustive laboratory tests (eleven in all) enable us to hold the sulfate content to less than 0.006% SO4. If your formula is sensitive to impurities, this is the grade on which you should standardize.

AMMONIUM DICHROMATE CRYSTALS This grade is available for those photolithographers who find the convenience of rapid solubility secondary to lower costs.



MERCK & CO. Inc. Manufacturing Chemists RAHWAY, N. J.

New York · Philadelphia · St. Louis · In Canada: Merck & Co. Ltd., Montreal, Toronto



AN OUTSTANDING ACHIEVEMENT IN PERFORMANCE AND SERVICE

for the OFFSET PRINTER PHOTO - LITHOGRAPHER PLANOGRAPHER AND PHOTO - ENGRAVER

> Designed and scientifically engineered for precision mechanical operation of the exacting lithographic preparatory work before pressroom production begins . .



PATENT APPLIED FOR

THE CRAFTSMAN

Precision Copy Line-Up & Negative Ruler

Our experience as manufacturers of precision line-up and registering devices—in use everywhere in the United States, Canada and abroad—was used in the construction of this versatile, self-contained precision instrument.

Complicated cross rule forms become simple ruling jobs, either with pen or diamond point ruler. Its many uses - hair-line registering, retouching, stripping, opaqueing, masking, multiple layouts, positioning register marks and the simplified method of ruling paper or negatives in a fraction of the time usually taken by a skilled employee — combined in the one machine, is an investment no lithographic offset plant can afford to be without.

Send for Descriptive Literature

CRAFTSMAN LINE-UP TABLE CORPORATION

Main Office and Factory

49-59 RIVER STREET, WALTHAM, MASS. • 538 SOUTH CLARK STREET, CHICAGO, ILL.

THE

PHOTO-LITHOGRAPHER

Published in the Interests of Lithographers to Increase
Sales Efficiency and Quality

Volume V

APRIL, 1937

Number 4

Some Problems Confronting the National Association of Photo-Lithographers

THE Board of Directors of the National Association of Photo-Lithographers met in New York, March 19th. Several equipment and supply men met with the Board to give consideration to the work of the Association.

In reporting to the Board, President Paul Heideke said: "Since our Convention in September of last year your Association has devoted a large part of its efforts to obtaining educational material. In the present confused situation caused by State and Federal laws and proposed laws, with labor difficulties all around us, with every indication that we will have to face an acute shortage of skilled labor, your association is in a quandary as to which problem to tackle first.

"We have given much thought to the training of skilled workmen, but this, like other problems, requires time, thought, and effort. There is a divergence of opinion among our members how this training should be accomplished. Some feel that we should prepare the industry for the future by promotion a course in a recognized university, with provisions that such students must comply with the regular entrance credits and, in addition to the studies of chemistry and engineering applicable to photolithography, that the student be required to earn the proper credits in the general education studies, resulting in a complete education with specialized training in photolithography, but requiring four years. This kind of graduate would most certainly be a credit to the future of the industry. Others feel that we do not have the time to wait four years, and that we should localize this apprenticeship training, to fill the needs of the locality or district. There is merit in both opinions and I feel that both should be developed as quickly as possible.

"The Lithographic Technical Foundation has taken a

forward step in the right direction. The profits and progress of our industry are dependent on the availability of properly trained skilled workmen.

"Scattered reports from members indicate that business is good in so far as volume is concerned, but in most instances it is claimed that the total net profits are entirely too small, considering the large volume of production. Net profits in the industry have been comparatively small due in a large measure to lack of cost information or the failure to apply the information in making quotations. Even these small profits will vanish entirely if the industry does not recognize that a great many so-called taxes are a part of our daily operation costs, and they must be considered as a part of cost. The Social Security tax is definitely a factor in the cost of our completed service and it should be so recognized. There are some state taxes that are in the same category. Stabilization is still the most talked-of problem, and apparently there is no definite road of success to follow. Some areas have been successful in stabilizing certain services, and their net profits undoubtedly reflect the desirability of such efforts. This problem will probably be always with us, and while it cannot be cured, it can and is being aided by co-operation, to the profit of the area that has the backbone and leadership to promote it.

"Before the year 1937 has ended we are most certainly going to be confronted with a very serious skilled labor situation, in that there will be a far greater demand than supply. This condition must be alleviated, and prompt and serious consideration must be given to this problem. I believe our industry needs our association more now than it ever has, and it is my hope that the industry will support it more whole-heartedly than ever before."

A CENTRALIZED PRODUCTION CONTROL SYSTEM

By L. W. SPAULDING, Spaulding Moss Company

HOW many times have you heard something like this coming in over your 'phone, "When do I get my two hundred copies of that letter I sent you the other day?" A weak, "Hold the line, please, while I see what I can find out" goes back over the wire to the disgruntled party on the other end.

A hurried calling of this clerk or that clerk, with its attending confusion, to see if they know anything about the job. Then comes the second timid request made to your further irritated customer, getting permission to call him back a little later when the necessary information can be found. With the relief of having closed the call for a time, you rush a clerk off down through the various production departments in an effort to locate the particular job.

The work order envelope, more than likely, carried a certain number and was attached to some flat. It was probably waiting its turn to be made into a plate, or it might be in the press room waiting to be put on the press. It might even be all printed, but had not been moved to the finishing room where it would be cut out and shipped. (This all took time and was the cause of many very unpleasant circumstances, which were hard to explain.)

This, as the plant grew bigger, would mean more and more confusion, inefficiency, and no end of lost time, as it would take not one clerk, but several, who should be equipped with roller skates to speed up their rush visits to the limit of the plant.

Looking at the matter from the side lines, it is very evident that the man writing an order might remember when he turned the work over to the camera department, but beyond that he would not have the least idea where it might be located. To complicate matters more, after the individual order leaves the assembly room, it has further lost its identity by having been combined with several other orders to make up a plate for a larger size press, and so was considered not as an order number, but as a plate number.

In order that we should not drift into any such inefficient method of always keeping in constant contact with an individual customer's order, we set up a special control system, a brief description of which follows.

Our centralized production control system requires one control clerk only at a desk centrally located in the plant, with telephone connections to

the various departments, also, of course, with outside 'phone.

The order clerk plans and types up the customer's order on one of our regular numbered order forms, which includes (1) our billing form, (2) the office copy of the bill, (3) the work order—which is pasted to the work order envelope—, (4) the packing slip, (5) the shipping slip, and (6) a salesman's copy. Once or twice a day the accumulation of bill forms (No. 1) are sent to the estimating office—where work order envelope (No. 3) also finally arrives when job is completed and shipped—and from there the job is billed. The shipping forms (Nos. 4 and 5) are sent through direct to the shipper in the same manner. He sees that a sample of the job is inserted in the work order envelope before the envelope is cleared to the estimating and billing office. A sample of the job is also attached to the salesman's copy (No. 6) of the order form and sent to the sales department.

The control clerk has before him a loose leaf book with the forms shown in figure No. 1, which are two pages taken from his book. When he receives a work order envelope from the order department, he marks down in his book our job number for the order under "job number," then customer's name and address, and if possible the name of a person in that organization with whom to contact. Also, hour and day job is promised, number or quantity of run, then any exceptions under "exceptions" column which he may find helpful to note down.

The work order envelope is now ready to pass on to the proper department for production. The approximate time of delivery to these departments is checked under the columns marked 10, 12, 3 and 5, meaning 10:00 A.M., noon, 3:00 P.M., and 5:00 P.M. When the art and camera departments complete their part of the work, the job envelope is returned again to the control clerk, who checks again, in the proper line for the job number, the hour it goes to the assembly room.

In the assembly room we make use of the form illiustrated in figure No. 2, which is called a press sheet. This sheet is made out in duplicate when a flat is made up to economical press size and equal run of several different jobs.

We number the press sheets numerically beginning with number one the first day of the month. A new series is started on the first day of every month. The press size is also shown with this number.

	CUSTOMER	PROMINES	QUARTITY	EXCEPTION 8	ART	SMALL	CAMERA	ASSEMBLY	LAYOUT	PRESS DEPT.	LAYOUT PLATE NO	PRESS DEP
		-		-	***	7911	9939	9911	PLATE NO	L R. C. L. L-S-B S-B-L	PLATE NO	L M. OF E- L L-5-B 5-0
100	Or the Smith	1.		(2.00)					, 1000-		1	
***	W. A. S. S. C. C.	1 10	1 - 10	77.54		1111	1111		1001-	100 20		
100	15/6 0-000	V 1-1	40	D stafe at					28	111 22 3	}	
		1 100	1- 250	POU- STAN					3 /000-		}	
100	2 strack Street + Co	V 3-10	HAT ACA	04000				1	1000-	16 10		+++++++++++++++++++++++++++++++++++++++
100	3 Fal Ca 2-000	Va-8	**	m ==		I U I			4		1	
	7-2-	150	/ - place	Digor Halla					a 1000-	(1) (6)		
100	Brune v Co.	X-4-10	- 250	Car - 40			/	1		111 16 10		4444444444
400		1 500						1	6 /***		3	
100	sace add	V 3-1	14 - 48	D10"-500	++++	4		4	1000	100 6 100		+++++++++
100	Alack Print Ca.	100	- 400					1	7.8	111 19 5	1	
		1 -	1 - 40	110					1 1003-			
100	Smith & James	Va-d	K-15	(Carl'oras	4	-		4	(100)-	111 21 11		11111111111
1000	white Bres.	V3-3							1	11/1 10		
2000	Waire Gree	1			1111				1003-			
100	L. C. Ecoablia	Vez	- 44450	176	+++++		1		10	111 21 10		
		1	4 - 14						11 1003-		}	
TATI	J. B. Blood Co.	V 4-4	2 - 24	327-000	++++	4		4	1000 -	111 20 200		
1011	Hagrana + San	V3-3	4 - 150						10	100 000	1	
		1 15							13 1005	1	1	
1012	Bicd - San		- 411			-		-	1000-	111		1
1013	sieger co	Va-0	- 100	Penna					14	221 45 3	1	
	0								11. 1004-	10.00		
										111 10 12		
									16 1006-		}	
									1005-	111 20 10	1	
									77]	111 20 0	1	
					1111				18 1004- 1018.		}	
_									1011-	111 13 10		
									194	111 11 12		
									205 1007-	NAT	1	
										111 20 12		
			1						1			

Control Clerk's Record Book

Example—plate number on form filled in, as of today, would read 3 for third month, I for plate number, and EL for size of press, i. e. 3/1/EL. Under work order numbers would be listed our job numbers which make up the plate—as 1000, 1010, 1012. The remainder of the information is for the press room, and so does not come under this discussion.

One press sheet goes to the control clerk, who enters plate number shown on press sheet in column marked "plate number" opposite all those job numbers in his control book which are also shown on the press sheet. Since there may be as many as eight one page orders on this press sheet, we thus have in the control book the same plate number showing against eight, perhaps widely varying, job numbers. This press sheet then goes forward to the press foreman, who, since they are marked for size of press, sorts them out and posts on a file board, one for each press; and so has a complete advance picture of all presswork coming.

As the flat is completed it is opaqued, cut out, and checked. Then the layout department checks through to the control clerk, who enters in his control book under layout department column—"plate number," "job numbers," and "time out," from layup department.

With the information now complete before him, the control clerk then makes up a one or two hour work schedule of the order in which plates are to be made. Since he knows the promised date for all jobs, his list for the plate department order of making plates may be widely separated from the actual numerical order of the press sheets. He also makes out a list for the running order of plates in the press room.

During the time that we have had this system in use, we have found that through the schedules which the control clerk makes up three or four times during the day-covering the making of plates and their running in the press room—it is only necessary for him to be informed by the plate and press department division heads as to the plate numbers which have been completed, in order to mark the information in his control book under plate and press department columns. It eliminates the necessity of calling those same departments asking why certain plate numbers have not been passed on. Both plate and press department keep the control clerk informed by 'phone as to the exact standing of plate numbers, so that at all times control clerk can state from a glance at his book where job number so and so is, even though it is a multiple job assembly.

The control clerk also, since he knows plate and press production times, has the added responsibility of scheduling in advance more complicated and difficult book jobs. Here his procedure is to allot the

The new salesman encounters odd terms in photo-offset—"Blow-up," "Crop at neck and bleed the bottom."

WHEN a salesman makes his first connection with some photooffset house, without any knowledge whatsoever of the techniques and methods of production involved, he is either taken on purely a commission basis or given a drawing account. In one case, the salesman is able to finance himself for a spell, and he banks upon his ability to make good. In the other, there is some reason why he is considered worthy of a weekly drawing account against future earnings in commissions. He may have sold letterpress, gravure or may have been successful in other fields of the graphic arts. He may have sold

THE SELLING OF PHOTO-

The Second of a Series of "Brass Tack" Articles

By WILLIAM WOLFSON

advertising space. At any rate, he supposedly has the necessary contacts.

Some large photo-offset houses will take on a group of likely young men, pay them a weekly salary up to \$25; put them through a course of training; and figure that within a period of six months or a year, a few of the group will win their spurs. Smaller plants have advertised for a group of ten or twelve junior salesmen, who will "be paid while learning." Possibly a salary of \$10, \$12 or \$15 is offered, for several weeks. These juniors go out with the experienced men for a few days and are then allowed to shift for themselves.

The introduction to a photooffset plant fascinates. The cameras, the flaring arc lights, the stripping tables, the plate-making department, the artists at work, the operation of the presses—these are intriguing. The low rates of combination jobs run in black ink on the 20-lb. white sulphite stock seem so reasonable, the possibilities and the market so universal, that the salesman feels sure of orders readily secured. What a simple, easy way is provided to start: a standard price list on combination work, plenty of samples—and opportunities galore to get in on tailor-made jobs.

Then, too, the trade "lingo." There are blow-ups, reductions, reverses, strip-ins, line and halftone shots, highlighting, surprinting; tusching, exposures, color filters, "pan" shots; and so on, all along the line of operations, even to the unique expression which indicates a delay in production, of a form "walking off the plate."

The enthusiasm enkindled at the onset is apt to die down after the salesman who expects much combination business merely for the effort of calling upon practically any business house finds that he can go days, perhaps weeks, without scratching. Occasionally, a new salesman

clicks immediately; that is, his first week's work is so gratifying to himself and his house, and he is prone to think, "where has photo-offset been all my life!" The lean weeks which follow tend to cause him to the other extreme of complete discouragement.

That is why I started this series of articles as I did—to stress the significance of proper application, an understanding of the relation of the salesman towards his job. For our immediate purposes, let us define application as the avoidance of superficial thought in the use of plans and methods, a close examination of the apparently obvious things to do, deep thought devoted to all phases and factors, and intelligent planning for progressive success.

Since most photo-offset salesmen start with combination runs, we will give the subject some attention. Throughout this series, of necessity, I must mention things written about in previous and disconnected articles on selling that were published in The Photo-Lithographer.

Assume that the salesman is provided with a published price list on combination work. It tells him what the rates are for one side of a sheet, and both sides; what to charge for various sizes of paper sheets; the cost of operations such as halftones, strip-ins, reverses, etc. As thorough as the price list appears to be, it is incomplete inasmuch as peculiar factors enter. Salesmen are not usually told this, but the price list is a guide only.

To illustrate: (1) The salesman may bring in an order comprising any number of individual copies, to be run one side of a sheet $8\frac{1}{2}$ " x 11", punched three holes for some sort of a loose-leaf catalogue. A cheap job, since run on 20-lb. bond in combination. Yet because there are dozens of pasted up portions on each layout sheet, hours and hours must be spent

OFFSET LITHOGRAPHY

on opaquing. The plant expects to opaque an average page without extra charge, but a terrible hodge-podge entails considerable labor cost. Yet the salesman finds nothing in the price list about this.

irst

im-

to

een

ich

her

nt.

of

sig-

an

the

our

ine

er-

ind

the

ep

nd

for

en

rill

n.

ty,

ut

les

HE

0-

on

at

et,

or

he

es,

gh

is

C-

ly

de

an

19

be

of

b,

a-

of

ut

nt

R

(2) The salesman accepts an order for 500 copies of a typewritten message on his customer's letterhead. At present rates prevailing in New York City, \$2.00 the first hundred copies, 25c per hundred copies thereafter, the obvious price is \$3.00. But the customer's letterhead shows lines of shaded lettering, very fine lines. At the \$3.00 price, one shot is taken of the entire sheet. The photographer shoots for a general effect; and the shaded letters might fill up on the press. The result is the customer rejects the job, perhaps the account is lost. The customer should have been informed-told that in order to get best results, two shots were needed, and that the extra cost involved would be 75c. Hundreds of other examples could be given.

The activity of most photo-offset plants is such that no provisions for adequate schooling of new salesmen were made. Immaterial of how much or how little practical information is imparted to the new salesman, it is up to the salesman, himself, to acquire the knowledge he needs so that he functions perfectly. Indeed, the new salesman should be a big and hollow question mark. Knowledge is as much as 40% of his total sales-kit. And the very first thing he must do is to acquire as much knowledge as he can in the shortest possible period of time; and, furthermore, to apply this knowledge to his selling efforts intelligently.

He must be observant. He must determine the whys and wherefores of all operations he sees in the plant. During interviews if questions are put that he cannot answer, his best response is a frank "I don't know, but I'll find out and tell you." And he should find out everything he can about the point raised. He should

read books and such periodicals as The Photo-Lithographer.

We move on to the tailor-made jobs; i. e., jobs individually handled and run with others in combination. There are types of salesmen who can barge in anywheres and secure things to estimate upon. These are then carried back to the office and a price secured, which is conveyed to the customer. There are other personalities found in salesmen that veer away from what is unknown. Unless what constitutes a tailor-made job is known to them, they will never get beyond the combination jobs.

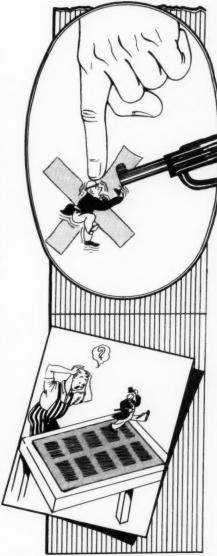
Even if a salesman is never expected to be able to estimate on special jobs, he should know about the details of an estimate. Some plants refuse to allow any salesman to estimate on a job; but it does not harm to possess the knowledge, which will stand him in good stead in sales work. For example, knowing the requirements of his customer. what he is in the habit of spending, should specifications on a special job be such as to mean a high price, the salesman because he possesses adequate knowledge knows how to modify and tone down the original specifications. Thus an order may be saved.

Now, the elements upon which an estimate are built are simple. They are as follows:

Selling Price of Litho Plate. Selling Price of Press Run. Selling Price of Paper Stock. Selling Prices of extras.

As simple as these elements look, there are complications in each and every one.

There may be presses of different sizes in the plant. On what press will the job be run? That is determined by the page size or sized sheet used. The selection of the press determines the number of impressions. Paper comes in different weights, colors, qualities, finishes, etc. And extras include not alone such things as halftones, reverses, strip-ins and operations done in the plant (these are



The "lingo" of photo-offset—"Shoot this man," (below, a sad state of affairs) "A form walks off the plate."

encountered also in combination run jobs) but outside operations—type composition, binding, etc.

So you see, there is much for the new salesman to learn. It will take him at least two years to acquire fundamentals of all factors. Any element given above is a study in itself. Take paper stock: once known, and thoroughly, substitutions satisfactory to the customer as to quality can be made. Where the loss of a good order is a possibility, and a major charge is the paper, perhaps the salesman can scout about and pick up a close-out of suitable paper at a reasonable figure.

(Continued on Page 60)



BELIEVE it or not, as Mr. Ripley would say, the photo-lithographic newspaper has arrived. Just at present the field seems to be among the semi-weekly and weekly newspapers published in the smaller towns and cities throughout the country. And the reason for the photo-lithographic newspaper is that a considerable percentage of newspaper readers demand more and more illustrations. We have an example of this in the remarkable success obtained by several recently-launched publications of national circulation which consist almost entirely of photographic reproductions of news events. Of course, in the larger cities daily newspapers maintain crews of photographers, obtain photographs from many other sources, and also have complete photo-engraving departments of marvelous efficiency. These departments are so well equipped and organized that it requires but a few minutes to make a halftone and have it ready to be inserted in the type page ready for stereotyping. In addition, more and more large newspapers issue at least once a week rotogravure supplements which make it possible to reproduce photographs much more clearly and distinctly than is possible by the ordinary newspaper presses.

Of course, newspapers published in the smaller towns and cities just mentioned have not been able to make their

publications more interesting by illustrations of local happenings. The expense of a photo-engraving department is a considerable item—quite beyond the budget of any newspaper without a large circulation. Furthermore, many of the presses used for these newspapers are not suitable for good halftone printing, nor are the pressmen who operate these machines capable of securing satisfactory results. A third handicap the smaller newspaper encounters is the difficulty of securing satisfactory photographs. Now, however, with so many new cameras on the market, which enable nearly everybody to secure at a slight cost pictures that will enlarge in a satisfactory way,

And the fact that there is now available at reasonable cost web-feed photo-lithographic presses capable of great speed, and to which can be attached either magazine or newspaper folders, or other special attachments, means that the smaller newspapers throughout the country can now give to their readers photographic illustrations even better than those printed in metropolitan daily newspapers, and which will compare favorably with those in the rotogravure supplements.

the question of securing photographs seems to be solved.

One of the first of these offset printed newspapers we have examined is the January 22, 1937, issue of the Mount



Vernon (N. Y.) News. This was a 16-page tabloid, and the reading matter was typed on a variable spacing type-writer with proofs of typeset headings pasted in. From a typographic point of view the result was not very pleasing, but the photographic reproductions were excellent. Speaking of his plans for the future publication of his newspaper, the publisher of the Mount Vernon News said that he was planning to order a photo-lithographic press that would deliver a folded 24-page newspaper at high speed.

Another offset printed newspaper, The Peninsula Mirror, Palo Alto, Cal., uses type composition throughout, and the reproductions of the photographs are unusually sharp and clear, especially when one considers that several were made by amateur photographers. This was printed on a 22 x 26 inch sheet-feed press. In this newspaper appears an interesting example of how to avoid the expense of type composition. It is an advertisement of a grocery store. Within a border which carries at the top the name of the store, address, and some advertising matter, is a large blank space divided into rectangles. Evidently, just before going to press these blanks are filled with hand-lettering, giving the names of various grocery products and their prices.

A third newspaper, a weekly, The Worthington Reminder,

is produced on a 17 x 22 press. Distributed free, it has a large volume of advertising.

It is quite evident from the appearance of these three newspapers that it will not be long before the more enterprising smaller newspapers throughout the country will abandon the letterpress method of printing and adopt the photo-lithographic process. Sensing that here is an untouched field for the photo-lithographic method, the Webendorfer-Wills Co., of Mount Vernon, N. Y. has produced a web newspaper press that will enable the smaller daily and weekly newspapers everywhere to give their readers illustrations which will compare favorably with those in large metropolitan publications.

A secondary advantage gained by the installing of a web-feed photo-lithographic press, is that it makes possible the printing of picture supplements for other newspapers who can not afford to install a press of this kind, nor to use rotogravure supplements. It is known that illustrated supplements increase the circulation of newspapers, in some instances as much as 25 per cent.

A firm that has recently installed a web photo-lithographic press for newspaper purposes is the Long Publishing Company, of Philadelphia. This concern publishes a large chain of small newspapers in Pennsylvania.

cal

rt-

of

re,

ot

nen

tis-

per

to-

he

a

av.

ble

eat

or

ins

an

en

VS-

in

we

nt R

DON'T FORGET DEPRECIATION

EPRECIATION, the dictionary tells us, means to fall in value, or to be of less worth. The photolithographer should always keep this fact in mind when he considers the value of his plant, when he estimates on a job, or when he totals up his gains or losses at the end of a month or a year.

You buy a machine, a camera, or some other piece of equipment, to be used to produce work from which you expect to derive a profit. Now, since what you have purchased is sure either to wear out, be damaged so its usefulness is permanently impaired, or becomes obsolete, you should never think of it as being owned by yourself. Instead, the only way to be honest about it is to regard what the machine or device costs you as rent paid in advance for as many years as it will yield a profit.

The foregoing is the only correct and courageous way to face the depreciation problem. Don't try to "kid" yourself that any piece of equipment will last forevernot even the lens of a camera. You may, by careful attention and good luck, keep a piece of equipment in good repair for years. Ten years hence it may be as good as it ever was, yet so out of date that you may have to pay a

junkman to haul it away.

Every machine or device has but a limited period of profitable use and then it must be replaced. Therefore, you must set aside a certain sum at frequent intervals so that at the end of the period, be it a year, ten years, or twenty years, you will have the money to replace it. The money you thus set aside cannot be regarded as unexpended profit or addition to your capital assets. It is just what its name implies, an account to keep unimpaired the capital assets of your business, but it does not increase those assets by a penny.

Keep in mind, also, that the depreciation account should be set up the moment the machine or device is installed. Remember that from that moment it becomes second-hand, and there has taken place a tremendous shrinkage in value if you should attempt to sell it. Remember, too, that when you bought this equipment you paid not only what it cost to manufacture it, but a tremendous selling expense, and usually a service charge. The manufacturer of this equipment is in the same boat that you are. He has overhead charges, he must pay for experiments that result in improvements, he must pay for advertising, for the cost of having service-men inspect the equipment at frequent intervals. At least you think he does, but this is not true. You pay for it all, plus a profit. And you, in turn, must pass all these costs on to your customers if you expect to conduct your business at a profit.

Instead of a new camera or a new press, suppose you had bought a new automobile. Drive it as carefully as you choose for only five hundred miles, and then attempt to sell it for what it cost and you will have some idea of the

amount of depreciation that takes place instantly when any photo-lithographic equipment is installed in your plant.

Let us consider a lithographic press for which you have just paid, in round figures, the sum of \$10,000, that being, with the various attachments, the total cost of the press when installed in your plant and ready for operation. This press has an economic life of not over fifteen years, and the entire \$10,000 must be absorbed by the product of the press during that period. In other words, you must add to its hour cost an amount that will absorb the \$10,000 within fifteen years. This cost is apart from other overhead expenses. As you are aware, this press will not earn you a dollar of profit until it has absorbed the cost of light, power, wages, supplies, etc., and to these expenses must be added the rental or depreciation charge before there can be any profit.

Expressed in another way, and as has already been said, you do not own this press. All you have done is to rent it for fifteen years, paying the rental in advance, so do not forget that in the amount you set up for depreciation, and which you added to the hour cost, you must also include what this \$10,000 you paid out would have earned for you in fifteen years if you had invested it in an interest-bearing bond. Furthermore, when figuring this item, don't assume that you would have invested the money in a bond yielding a low rate of interest, such as a U. S. security. Instead, consider that you would have invested it in a bond yielding at least 6%, and which involves a certain amount of risk. The reason for this is that no business, least of all a photo-lithographic plant, has that stability to be found in a government bond. Therefore, you need to add to the rental charge at least 6% interest on that \$10,000. Of course, as the depreciation charge increases with the passing of time, the interest charge on the \$10,000 decreases in proportion. Therefore, at the end of fifteen years you should have back your \$10,000 investment, plus what it would have yielded in interest at 6% over that period.

We have suggested fifteen years as the profitable period of a lithographic press. This period, we must admit frankly, is a guess. No one can forecast the future. This press may be good for twenty years. On the other hand, so great is the advancement being made in the photolithographic industry that it is possible the press may be obsolete at the end of ten years. The period of fifteen years has been selected as one that seems about fair.

Of course, depreciation charges should never be confused with charges for repairs or wear and tear on the machine. The latter items are uncertain factors. With a press, lack of lubrication or careless handling by unskilled or indifferent pressmen may almost ruin it in a short time. On the other hand, if in charge of a skilled and conscientious pressman, at the end of fifteen years it may be in

very good condition. Nevertheless, to operate such a press will cost you money because of obsolescence. With all the inventive ability now engaged in improving photo-lithographic presses, it is obvious that fifteen years from now the presses of today will be so out of date that in the second-hand market they will command only the price of old metal.

ien

our

lve

ng,

on.

rs,

ict

ıst

he

er

ot

es

re

en

to

so

e-

ve

ın

is

ne

15

re

is

1.

1-

it.

r

n

d

e

2

Other equipment required by the photo-lithographer should have charged against it different rates of depreciation. We are frank to say that we do not know what should be charged against a camera. We would be inclined, however, to set the profitable life of a camera at twenty years, and would appreciate it if any one in the industry would advise us if this figure is correct.

It seems to us that every photo-lithographer should make a serious study of depreciation, and in setting up an hour cost for any piece of equipment he should determine its true profitable economic life, and then charge against that equipment what it will cost to replace it when it no longer yields a profit. This is the only way to build a permanent business. The successful photo-lithographer is the man who always has a cash reserve or credit to replace any press or equipment as soon as it is worn out or becomes obsolete. Thus, his plant is always up-to-date and he can always produce work at the lowest possible cost. Such a man has no fear of competition.

The "ignorance of the law excuses no one" is a wellsettled legal principle. It is high time that ignorance of costs be no longer considered an excuse for cutting prices.

Remember that the men who are making money in the photo-lithographic business are those who know what their work costs and, therefore, have the courage to ask a fair price. Be wise! Join the prosperous procession. Keep away from the mob of price-cutters.

It has been truthfully said that no man is useless who has a friend. The more friends you have the more opportunities you have to obtain work at fair prices. Therefore, keep your friendships in good repair, and constantly strive to make more friends.

In urging the customer to pay a fair price for photolithography, impress upon him that the standards in all methods of printing are constantly improving and that his advertising matter will fail of its purpose unless equal in quality to that of his competitors.

Self-satisfaction means stagnation. Do not be content with your high production costs and low prices. Make friends with your competitors. Exchange freely with them new ideas in shop management, as well as ideas of how to get better prices for photo-lithography. You will all benefit.

BRIEFS

In writing for literature we would appreciate your mentioning The Photo-Lithographer

"Supplies for the Graphic Arts." A 146-page catalog issued by Norman-Willet Co. lists many of the lithographic establishments. Profusely illustrated, it covers in interesting fashion subjects such as plates, films, paper, lenses and screens, equipment for plate-making, etc. A copy of this catalog can be secured by writing 318 West Washington Street, Chicago, Illinois.

Marquardt & Co., Inc., prominent paper distributors in the New York territory, issued a cover-paper chart which shows specimens of twenty-six different lines of unusual cover stock, many of which are adaptable for offset lithography. Write to Marquardt and Co., Inc., 133 Spring street, New York, for your specimen chart.

The International Printing Ink Corp. has acquired control of the Continental Color Corp., Cleveland, O., and will operate this firm as an I. P. I. subsidiary, effective immediately. No changes in personnel are contemplated.

The Maxwell Paper Company's specimen portfolio, "Meets All These Tests and More," contains unusual lithographed samples of runs on Maxwell Offset. The Maxwell distributor in your territory will gladly furnish you with a copy of this portfolio.

From the standpoint of business received, the Meihle Printing Press & Manufacturing Company has just completed the best month in its history. Forecasters and analysts have stated that 1937 will be a splendid business year generally and that there will be a specially large demand for modern high-speed machinery. Lithographers here and abroad are apparently realizing the necessity of rehabilitating their plants with modern, fast press equipment. This is partially confirmed by the large number of press orders received by the Miehle Company during the early part of 1937.

Sinclair & Valentine Co. announces the opening of a new branch at 2202-6 Superior Avenue, Cleveland, Ohio, where they are equipped to give complete service to the lithographic trade.

Advertise In

THE PHOTO-LITHOGRAPHER

The Lithographed Medium

Plate Finishing Operations; Preservation on Press

By Dr. L. R. Meloy

THE finishing operation is important on an albumin plate but is much more important in deep-etching. On an albumin plate, the best way is to roll up the plate or rub it up, and give it the etch.

Some platemen, after the roll up or rub up, use gum on the plate. I don't think that is a good policy. If gum is used when the plate is inked or if the plate is gummed and you try to bring up the image, you protect any tint or scum that is in the grain which cannot be found until the plate is on the press. Take the plate after development and roll it up—that is, after it has been washed well with water, while it is still wet, dry down the excess water and roll it well. Tints or undissolved coating on the plate show as a black tint and can immediately be cleaned. You cannot tell that the plate will show a black tint when it is finished under gum.

Some operators find that by using gum to rub up a plate, they take tint out of the plate. It may take the tint out but on many plates made with synthetic albumins, you don't always develop the albumin off of the plate clean, even though you have used the second counter-etching or the pre-etch. When the plate is gummed up or when the plate is rubbed up with gum, the platemaker does not ink the scum of albumin or synthetic albumin. The gum protects the scum, but it doesn't protect the image because the image has some ink on it already and will attract more. But if the plate is rolled while it is wet with no gum on it, the material on the plate, whether it is undissolved albumin or glue or a tint due to alkali not being properly removed in the counter-etching-any of these conditions that cause a tint will take ink and may easily be determined at this point. If the tint is too strong to be removed, it is well to re-make the plate. When the tint is light it can easily be removed with etch and gum.

Some operators after they roll up the plate, gum it, and then wash off the gum. There is little reason for doing this. Other operators clean the plate after they have finished, roll it, and then they dust it with talcum or rosin and put it in the trough and start cleaning it, washing out wherever there are spots that do not belong on the plates. Then the plate is given the final etch. That to my mind is the best procedure because it gives the cleanest plate.

In the March issue we published a paper on "Making An Albumen Plate" by Dr. L. R. Meloy. In that paper, the term "a standard albumen method" was used. He should have stated that the standard albumen method is that of the Lithographic Technical Foundation, as described in their Research Bulletin No. 6.

The author of these articles delivered a series of addresses on technical subjects for the Lithographic Technical Foundation some time ago, and draws largely upon the experience he gained in his teaching work.

Phosphoric acid and gum is the etch for plates to be bichromated, that is, desensitized by the gum bichromate method. This etch is strong, being made up of one ounce of acid to 25 ounces of gum. If the platemaker does not care for this etch, or if it does not sensitize the plate sufficiently, bichromate can be added to it. That gives a nice yellow etch. The important point is to desensitize the plate so as to clean out whatever scum is present.

In glue coatings or coatings of combination colloids such as glue and gum, glue and albumin, casein, or the like, there is sometimes a slimy residue left remaining on the plate after the cleaning operation. When the platemaker puts his hand on the plate his hand slides slimily along instead of catching the grain of the plate. On an albumin coating there is seldom any effect of that kind. It is necessary to use a special clearing solution on plates that are coated with combination colloids or any substance other than albumin prior to the final etch, if the plate is to run perfectly clean all the way through. This solution is made by dissolving 650 grams of Hypo in 1 gallon of water and adding 270 cc. of 28% acetic acid. Pour on the plate and scrub well, then wash off.

THE BICHROMATE GUM METHOD

The formulas for making solutions, as published by the Lithographic Technical Foundation,* are correct, but there are two points you will have to change in the bulletin on desensitizing the plate. The bulletin published says to expose the plate a certain number of minutes based on humidity and other conditions, strength of arc lamps, etc., and

^{*} Bulletin No. 3.

then wash the plate under running cold water for two minutes." The exposure, from my experience, can be standardized at two minutes when the arc light is four feet from the plate. Washing should continue for ten minutes under running cold water. The excess bichromate all has to be removed or it causes a false tint to come up on the press. A pressman under this condition will think that the plate is scumming. Actually the plate is not scumming but the tint will persist in some cases for several hundred sheets and you cannot polish that bichromated tint or false tint out of the plates. With a bichromated gum coating on your plate, light hardened, and the bichromate not properly removed from it when it is sent to the press, you have to run the press until it works itself out. Many operators take a little pumice, a piece of felt and try to rub the dirt out, but that doesn't do a bit of good. The tint is in the plate photographically and unless the water is kept on the plate long enough, you cannot get it off.

Precaution must be taken when the platemaker uses the bichromated gum process. The plate should be washed under running water for ten minutes. Many plants which use this method have a perforated pipe set up at the edge of the trough fitted with a rack, and the plates are put on this while the water is flowing for the ten minute period.

Another important variation in plate making is the density or the gravity of the solution. A gravity of 1090 has been recommended. I have used 1050 in some plants with good results and 1040 in other plants. The ideal gum bichromate solution or, to put it differently, the ideal density for this solution is 1020. That is a specific gravity of 1.02. This gravity will perform under almost any humidity and for almost any press conditions.

The platemaker should have sufficient bichromate on the plate but not too much. If a heavier solution is used than that given, the operator will have difficulty in rubbing the gum down smoothly on the plate.

PUTTING THE GUM ON THE PLATE

Gum is put on the plate after it has been washed to clear the etch from the plate. The excess moisture is wiped off of the plate after which the operator pours a sufficient amount of bichromated gum solution onto the plate. With a clean piece of cheese-cloth it is rubbed down into the plate. When it has been rubbed down and the excess etch removed with a cloth another dry piece of cheese-cloth should be used to continue the rubbing down until this plate

is smooth and dry.* Don't leave the plate half dry and then fan dry it because that develops streaks across the work. The operator should rub the bichromated gum down smoothly until it is dry, just as he would a developing ink on an albumin plate.

As soon as the gum coating to all appearance is dry, it is well to put on the fan so as to make sure it is thoroughly dry. The plate is then exposed to the arc lamp and washed. After the plate has been exposed, gum the plate, wash it out, and put it under asphaltum so it can be sent to the press. This procedure insures the pressman against any trouble in scrubbing out the plate. It also provides opportunity for the operator finishing the plate to see that his bichromate has not covered any of the image.

The bichromate coating, "if not put on the plate uniformly, will cover the image in streaks and whereever the bichromate has hardened over the inked area, is almost impossible to remove." That will not happen if the plate is properly rubbed down, thin and smoothly. But it happens many times when an operator is in too great a hurry to get the plate onto the press and when it does happen the bichromate streaks are hardened across the work. If such a plate is sent to the press without proper washing, one would not know that anything was wrong with the plate until the pressman has wasted much time, and even then there is much lost time in scrubbing out the plate and scraping in the work that was bad. Where a plate is finished in the transfer department, the operator washing out the plate can see what happens and can at once remove the trouble. He uses his needle to make corrections in the bichromated areas. While the bichromated gum method is valuable for press plates, while it will insure their running clean—it is imperative that intelligence be part of the operator's makeup. One firm, trying for the first time the bichromated gum method, could not figure why the gum should be rubbed down thinly on the plate. This firm's platemaker resolved wrongly: "It is much simpler to put the plate in the whirler and pour it on and let it dry." They tried that procedure. Naturally when the plate was dry there was gum all over the plate, image and everything else. That firm condemned bichromated gum and did not use it for several years, until they were shown what was wrong. Some men will follow instructions intelligently and others just cannot follow them at all.

Bichromating the plate has several advantages other than that of making the plate run clean on the press. A bichromated plate requires less acid in the

^{*} Research Bulletin No. 3.

fountain water. It requires less water running on the plate. When less water is used one can use inks with more brilliance, or at least get reproductions that have more brilliance, because you are not fading or emulsifying the inks with the water going on to the plate.

A bichromated plate often puzzles a pressman. The plate has a sleek appearance when it is on the press. The pressman washes the asphaltum from the plate, drops his damper, rotates the cylinder a few times, lifts the rollers and dampers, and to the touch there is apparently no moisture on the plate, but when the pressman stands to one side and looks at the plate it appears to him that the plate is flooded with water. That fools the pressman and he shuts down the water, and shutting down on it finally runs the plate dry. Then he gets streaks all through the plate where it has dried up. But even here there is no cause for alarm because with a properly bichromated plate he can drop the ink rollers first and let the plate roll solid and then drop the dampers and the plate will clean up of its own accord. It may take a few revolutions to do it. If a sponge is used, it will clean up quickly.

The bichromated gum method is a life-saver and every platemaker should try it. It means getting a job off of a plate when you would question sending it to the press in the first instance. A plate carefully cleaned and bichromated will yield exceptionally long runs. It is difficult to approximate in dollars and cents the additional cost of bichromating a plate. It means in most shops at best only a half hour more time. The bichromated gum solution costs little more than a penny or two.

It is recommended for all size runs. One firm that uses it regularly will not use it on short runs, but several plants where runs rarely exceed five thousand, use it on runs regardless of quantity. They find that bichromating eliminates much press trouble. Another outstanding lithographer tried several plates without bichromate after there was controversy about what was causing trouble on the press, and the pressman blamed the bichromate. Plates, during the controversy, were sent to the press without bichromate and hours were lost cleaning the plate on the press, etching them and keeping down scums and tints. Their rule since this experience is "All plates must be bichromated."

In my experience in using the two Foundation methods, the albumin process, and the bichromated gum, for an extended period, I have yet to find a plant where the recommendations have not helped.

The bichromate method is the result of practical experience in many plants.

- Q. What if a change is to be made on the bichromate plate?
 - A. Simply polish the change in or engrave it in.
 - 2. How about a bichromated hand-transfer plate?
- A. Use sulphuric acid and glycerine to remove the bichromate coating. That is locally.
 - Q. And do you counter-etch the plate?
- A. The counter-etch has no effect on the metal after the bichromated gum is on it except on a long run. Some plates run 80,000 or 90,000 not rebichromated and still have some of the original bichromate coating on. A strong solution of sulphuric acid and glycerine will remove the coating.
 - Q. In other words, it is difficult to make a change?
- A. Yes. Under this method the operator is told, "Be sure the plate is correct before you bichromate it. Check it carefully for errors or omissions. Roll it up good." Work tusched on a plate has a tendency of washing off the plate when you are giving it the wash after exposure, and for that reason should be rubbed up or rolled up when you have added tusche work.
 - Q. How long does such a solution last?
- A. It should be made fresh every day. You can use it the second day but you will have a tinted plate.
- 2. Do you recommend the gum bichromate method for both a deep-etch and albumen plates?
- A. Bichromate is just as necessary on an albumin as it is on a deep-etch plate. However, it is more than necessary on a deep-etch plate because one uses a more drastic method to clean the plate.
- 2. Is the method of application the same regardless of the kind of plate?
- A. Yes, the image must have sufficient ink on it to withstand the etch. After the etch is washed off, put the bichromated gum on as previously described and expose and wash the plate.
- Q. Do you use the same solution and the same viscosity?
- A. Yes. A viscosity of 1020 is the best all the way around. 1040 and 1050 are used in several shops where conditions are more nearly ideal. With a viscosity of 1080 or 1090 you cannot properly work it down. The finisher finds it difficult to get an even coating on the plate when the density or viscosity is high.

CONTROL OF THE PLATE ON THE PRESS

"To secure consistently good results on the press, the form rollers must be true and must be set for a minimum of pressure. The backing of the plate and blanket must be adjusted so that the impression is uniform and the least pressure necessary to transfer the design to the blanket. During the printing operation the plate is maintained in a desensitized condition by means of the fountain solution. If the acid is too strong, the metal of the plate will be attacked too rapidly, and at the same time, if it is albumin plate the image will swell excessively thereby losing its strength and its ink retaining or receptive properties.

To secure consistently good results the fountain solution must be adjusted to a moderate acidity by means of pH control. As to the optimum or best pH values for fountain solutions for use on zinc and aluminum plates, only tentative recommendations can be made. Laboratory tests indicate that the best results should be obtained with fountain solutions of pH value 4 to 6 for both metals. The result of many press runs indicate that the best pH value for both metals runs in the neighborhood of 4.8."*

In checking solutions used in various plants, I have found that there is an ideal solution. That is a solution that can be used on both aluminum and zinc plates, which requires no change. One press foreman with a plant in the Middle West, running twenty presses, has never had any trouble with fluctuating pH's as he controls his fountain content. He says, "The best fountain etch for both metals is magnesium nitrate with a little phosphoric acid added; and to make it a little mysterious I throw in a couple of pieces of lithographic stone. After the solution has been made, I let it set for a whilefilter it, and it is ready for the fountain." My impression of that solution is that when he neutralizes the nitric acid with the magnesium to form a magnesium nitrate and he throws in this lithographic stone, he forms some calcium nitrate.

Many of these difficulties result because a pressroom does not want to use a standard etch. They
want to use something with which they are familiar.
They take the zinc etch and put it in the fountain.
A man stands alongside with a pH apparatus and
he tests the fountain solution after each addition.
They added up to 8 ounces of zinc nitrate to the
fountain solution. After this solution was developed
and a period of time elapsing equal to the running of
300 or 400 sheets, they found there was no acid in

the fountain. The usual fountain is constructed of brass with soldered joints. The fountain roller is brass, monel metal or aluminum. Most of the rollers are brass. The zinc nitrate acts on the brass and on the solder in the fountain and therefore is not carried along to the press plate. To keep a press plate running clean, with sufficient acid on it, a pressman should add every few minutes.

If an etch is used similar to the one described above, i. e., magnesium nitrate with phosphoric in it, the pH can be maintained at one point all day long and from day to day. Please notice I say at one point. Of course a change is necessary if different ink or paper is put on the press. Some inks require more acid, some less. For some inks or papers the fountain should be set at 3.8 or more acid. Others run with practically little acid, say an ounce to three gallons is sufficient to run the plate clean. To be on the safe side and so as to guard against trouble, when a pressman starts off in the morning with a new plate or even an old one, he should get the fountain solution to test around 4 to 4.8 and then as he runs he will note the reaction and decide whether he should modify the solution with more acid or dilute it with water. After he has adjusted the fountain solution in the morning, he won't have to worry about it again until he changes jobs or inks. So far as is known, there is no reaction between the magnesium or calcium fountain etch and materials used in constructing the fountain rollers.

Every pressman has heard it said that a plate oxidizes if it does not receive sufficient acid, and that if it gets too much acid it is eaten up by the acid. That is not so. You get as much oxidation with too much acid as you do with no acid at all. Disregarding the image or what type of image material on the plate we find that 4.8 is the ideal condition for running a plain metal plate on the press. If an albumin image is plotted on a curve it will be found that the image becomes sharp when you get below 3.8 or down to 3.8. The albumin image begins to get sharper and sharper. You simply keep eating away at the sides of it and making it sharper and when you go up the scale you find that around 4.8 the image is holding good. But then you get a very sudden jump when you have not enough acid in the fountain and the image begins to scum and swell up and eventually is lost because it has softened up and is going to walk away.

The relationship of the pH control is not concerned entirely with an albumin plate. We have two factors to consider when working with albumen, the

^{*} Research Bulletin No. 6.

oxidation of the plate and the image. We must consider the action of the fountain etch on the image. But when the work is a hand transfer, deep-etch plate or a reverse plate where there is an ink image, we don't have to worry too much about the image. We will not hurt the image in any way, but will oxidize the plate if we go too low or too high. In both cases, tints are developed.

Many pressmen have been heard to say: "I have plenty of acid in my fountain. Why should the plate tint up?" It tints up if you have too much or too little acid because of the reaction of the metal itself with the fountain acid. But if you use a control you should have little or no difficulty.

PH CONTROL AND ITS USE IN LITHOGRAPHY

Lithographic craftsmen long ago established the fact that the water fountain solution should contain acid, but they never had an accurate way of determining what the acidity should be and how to keep it under control, until the colorimetric method of pH control was introduced about five years ago.

The usual methods of testing the acidity by the use of litmus paper and the sense of taste gave results that were misleading because they were rarely accurate. As a consequence, pressmen working under apparently identical conditions got results that were far from identical. By means of the pH control we were able to show that conditions that had been considered identical varied widely, also that these conditions were controllable.

THE PH CONTROL

On page 77, Bulletin No. 6, the Foundation says: "The true acidity or alkalinity of a solution does not depend wholly on the concentration of acid or alkali in it, but is also a function of the activity of the substance present in entering into chemical reactions. The true acidity or alkalinity is expressed in terms of the pH value of the solution. The scale of pH values extend from 0 to 14, the values nearing 0 showing high acidity and the going toward 14 high alkalinity. Neutrality is indicated at 7. The symbol pH is a shorthand term for the logarithm of the reciprocal of the hydrogen ion concentration. For practical lithographic purposes the colorimetric method of pH measurement is the simplest and most convenient. It makes use of the fact that certain dyes undergo changes in color over definite ranges of pH values. For press fountain solutions we use Bromcresol Green, which is yellow at pH values of

3.8 or lower, and is blue at pH values of 5.4 or higher. Between 3.8 and 5.4 the color is intermediate between yellow and blue, the exact color being the indication of the pH of the fountain water."

When the acid solution is put into the fountain and the press started, two objectives must be kept constantly in view: holding the albumin image at maximum efficiency (this requires keeping the pH value of the fountain water between 4.2 and 4.8) and preventing oxidation or corrosion of the non-printing areas of the plate; least oxidation occurs when the pH value of the fountain solution is between 4.8 and 5.0 for zinc and between 4.0 and 6.0 for aluminum.

After experimenting under practical conditions for five years with the pH control, I am prepared to say that 4.8 is a safe average or starting value for both metals when albumin is being used; also that when due allowance is made for such variables as type of stock, kind and color of ink, etc., a range of 3.8 to 5.0 constitutes safe limits.

On hand transfers and deep etch plates, where no colloid is present, the pH range should be 4.0 to 5.0.

Other factors that may affect the acidity of the solution are the metal and solder of which the fountain is made and the damping rollers. And bear in mind that unless the fountain conditions, exclusive of the solution, are correct, no amount or quality of attention will keep the plate functioning satisfactorily for more than a few minutes. The usual result of improper fountain conditions is scumming or gradual disintegration of the work.

Under no circumstances should "boiled acid" (zinc nitrate), tannic acid, gallic acid, cream of tartar, sulfuric acid or nitric acid, be used in the fountain solution. Neither should chromic acid or bichromates be used when bichromated plates are being run as they tend to discolor zinc plates and they may also promote the development of a very troublesome scum.

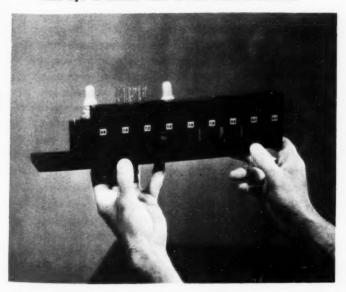
With the pH equipment to determine the strength, fountain water containing either Calcium Nitrate or Magnessum Nitrate and Phosphoric acid will work perfectly on both types of plates. Moreover, it will not "kill" itself by reacting with the metal parts of the damping mechanism.

By taking and recording readings on each job twice daily, noting the color and make of the ink, kind of stock, type of press plate and the pH reading, any foreman or pressman can easily secure fountain readings which will enable him to set up and run "repeats" without the usual delay.

Tubes filled with fountain solution



Add dye to middle tube to test fountain solution



Taking reading by matching middle tube with standard

TECHNICAL DEPARTMENT

By DR. L. R. MELOY

Questions and Answers

IT is hoped to make this department of great help to all subscribers to The Photo-Lithographer. It will be in charge of Dr. L. R. Meloy, who is so well known in the industry for his comprehensive knowledge of all details, not only of photography, but every photo-reproduction process. Therefore, if you are concerned with a difficult technical problem of any kind, do not hesitate to write to this department, explaining as clearly as possible what the trouble is, and, if possible, send samples of the work which you find difficult or impossible to print in a satisfactory way. It is more than probable that Dr. Meloy, drawing on his long experience, and the great store of technical knowledge he possesses, will be able to suggest a remedy.

QUESTION: We are using a standard deep-etch method in our plant and experience a great deal of difficulty in retaining the ink in the image areas. The ink sometimes walks off during the removal of the coating, and if it holds during this operation, it walks off after a very short press-run, often after just a few sheets. Will you tell us what the trouble is and how to eliminate this uncertainty?—New York, N. Y.

Answer: The deep-etch method you are using is probably the best and surest method commercially available, but like all chemical procedures, requires accurate manipulation, close attention to all details, and absolute cleanliness. It must be remembered that after a plate has been deep etched, there is an accumulation of oxidation products and other materials in the image recesses. This material must be thoroughly removed. In the method you are using, alcohol is the cleansing agent. Sufficient alcohol must be poured on the plate to permit thorough agitation over the etched areas and then squeegeed off. A second and a third application is required to sufficiently clean the recesses and make them ink receptive. A fourth application of alcohol is made and this is rubbed down well and fanned dry.

The lacquer base is then evenly applied and rubbed down smoothly and fanned dry. It is of great importance that this base be thoroughly dried. After this operation, the ink is applied and fanned dry.

If all the above operations are carefully performed, there is no reason for the ink image to leave the plate at any time and you can be assured of long runs from the plates.

YOUR ACCOUNTANT IS A BUSINESS CONSULTANT

By HERBERT H. LEVESS

Certified Public Accountant
New York

IN an industry growing as rapidly as that of photolithography, it would be well for its members to pause and take inventory of their status and compare such status with that of other well-organized trades. When members of an industry begin to take stock of themselves and indulge in self-criticism, they are then taking essential measures which tend to reinforce their security, both individually and collectively.

In "taking stock," I mean to include the recognition of fundamental principles which are the foundation of wholesome and efficient business practice, namely, a closely knit organization, interchange of ideas, friendly competition, maintenance of approved standards, and general fair-trade practices. That these principles are the very life-blood of every successful and respected trade is axiomatic in the economy of present-day business.

"Taking stock" should also include recognition of the invaluable services rendered by a profession which has become an inseparable part of the business world of today. I refer to the profession of public accounting. The knowledge and opinions of the professional accountant are based, not only on mathematical accuracy perfected by rigorous training, but what is of equal importance, upon business concepts which have been evolved from the successes and failures of individual enterprises over a period of many years.

The important nature of the services performed by independent public accountants is recognized by practically all business men, and no industry today would attempt to function without them. But the real point of emphasis, the pertinent thought which I hope this article will make clear, is that comparatively few executives really take advantage of the services their accountants have to offer, and are in fact anxious to render as part of their engagement.

The exceptions to the foregoing statement are for the most part men associated with big business, executives who have risen to the heights of financial success because they know the value of listening to and weighing competent counsel. It is only natural logic, that when an individual or an organization employs an accountant, they should derive the greatest possible benefits from the service which he renders, usually theirs for the asking.

The accounting profession of today has one thing in common with the photo-lithographic industry, and that is that they are both comparatively young, vigorous and receptive to new ideas. Restrictions, making public accounting a public concern, with definitely fixed responsibilities, were first imposed in this country by New York State in 1896. Persons who desired to practice as certified

public accountants were subsequently required to submit to state regulation and pass exacting state examinations. Since that time all of the forty-eight States have given official recognition to the profession and provide for use of the title C. P. A. upon the satisfactory completion of definite requirements.

Originally, accountants were bookkeepers, and the words were used interchangeably. Gradually, as the commercial world expanded, and business procedure grew complicated, the checking and analyzing of records by independent persons or firms became an indispensable adjunct. Thereafter, the accountant's activities were separated from those of mechanical bookkeeping and he was recognized as an auditor of accounts.

The rapid development of the commercial world, with the accompanying complexity of administration, has resulted in expanding the accountant's scope of service and in increasing his responsibilities. Not only must he be an expert at figures, but he must also be a keen analyst; he must have financial vision, and above all he must be an astute business man with a good supply of old-fashioned "horse-sense."

In Great Britain, the services of the professional accountant have a far greater scope than in this country. Here, the services customarily rendered are only a part of the duties of the British accountant. There he is consistently appointed as trustee, receiver and referee which in the United States are commonly considered as matters to be handled exclusively by attorneys. Accountancy as a profession received its impetus in Great Britain, when that country turned from an agricultural nation to one of industry and commerce, and it seems that they have made greater advances in the field of public accountancy than we have. In recent years, business interests in the United States have tended towards similar advancement in their concept of the duties of the professional accountant.

The certified public accountant provides modern business with a variety of personal services which, to a great extent, center around the books and records of an individual enterprise. These duties furnish the working material for the broader and more important service of supervision and counsel. The usual and commonly accepted services include:

- I. Periodic Audits
- 2. Financial Statements
- 3. Production Costs
- 4. Systems and Budgets
- 5. Tax Work

To this must be added Business Advice, or Consultation.

Many industries have in recent years expanded so rapidly that they have gone far beyond the capabilities of the average executive. Selling has become highly competitive, and frequently it has almost reached the point of self-destruction. Production costs must be cut to the irreducible minimum, a factor which requires that the various elements be broken down into minute details.

NT

sub-

nina-

e for

etion

the

the

dure

ords

able

vere

l he

vith

re-

and

an

he

an

ned

ac-

ry.

art

n-

ch

ers

a

at

of de

ın

d

ir

lt

of

Financing problems are always present; and this is especially true in the photo-lithographic industry where the investment in fixed assets is quite heavy. Current tax legislation has increased the burden of basic costs and has put a high premium on corporate profits. In this maze of ever-recurring problems, the business man frequently finds himself in a state of bewilderment. "Talking things over" would do much in the way of clearing the haze about his problems and pointing out their solution. It goes without saying that the one individual to whom he should impart his business perplexities is that person who, next to himself, knows the most about his organization—his accountant.

The present-day accountant is on a par with the medical diagnostician as a consultant of industry. He stands in relation to his client as does the attorney or as the physician to his patient. He puts at your service invaluable knowledge, gained through his association with diversified business enterprises, and skill based on painstaking study and experience.

During his entire professional career, he continues to read and study accounting problems, current conditions, and business affairs. He mixes with his associates in his profession, and by the process of the intellectual exchange of ideas, he develops the required skill to diagnose sick businesses and to present constructive plans for the efficient operation of sound organizations.

Take Counsel With Your Accountant

Many people feel that the accountant's duties are to assure the honesty and accuracy of accounts, to verify and interpret records—but that is merely the foundation of his true function. If he cannot help in charting the course of your business so as to keep costs and expenses down or increase profits, then his value to your organization is nil. While he does not help to sell your product or solve your labor difficulties, he can—and frequently does—point out relationships between costs and selling prices, mistakes in policy, and puts on the hydraulic brakes when the business vehicle approaches danger zones. His main function is to help guide the conduct of your business, other duties, though necessary, being but incidental.

The public accountant is by far the person who is best qualified to counsel the average business man. He brings to his client not only an analysis and interpretation of his own accounts but also of the accounts of other clients with similar problems. The accountant in his varied contacts acquires a sense of perspective which is not distorted by his being too close to minor details. The broader view

of industry as a whole is part of his "stock-in-trade." His sense of obligation impels him to stand guard over your business, viewing it impartially, objectively, and pointing out its various weaknesses.

It is but rarely that a client will fail to divulge essential information to his accountant. He cannot be given to much data because the more he knows of your business the better he will be able to advise you properly. The feeling possessed by some business men that the accountant "knows too much" is not based on logical analysis. If you were to seek the services of your attorney or your doctor, you certainly would not think of withholding information about your affairs or your health. Your accountant, if he is worth his salt, should rate the same degree of confidence. In this country, we foster a high standard of professional ethics. The accountant acts as custodian of his client's interests and carries a responsibility, the seriousness of which he is thoroughly cognizant. He knows by the process of education and training that the client's interests must be held inviolably confidential.

How Expert Advice May Prevent Losses

Some time ago, one of my associates in the profession secured a new client. As is customary, he asked various questions so as to acquaint himself with the business. He was particularly interested in the account of a customer which had increased to a substantial amount. His questioning was regarded as presumptuous and he was requested to concentrate on his audit-which to the client meant merely checking up on the mathematical accuracy of the books. Two months later that particular customer failed, incurring a financial loss to the client which made serious inroads on his working capital. This client through hard experience has learned a lesson and now welcomes the inquiries of his accountant. It often requires such an actual or threatened loss to educate the client to the necessity of placing the greatest amount of confidence in his accountant.

I would like to cite another actual case in point. Some six months ago my firm was engaged by a client to conduct monthly audits. The first audit showed that the client was on the brink of insolvency, although an analysis of the previous year's transactions indicated a substantial and seemingly profitable business. We immediately sought for the cause of the present condition and found first, that a large contract had been taken with a customer on long terms, and, secondly, that there had been an extension of plant that had been absolutely unwarranted. The result was a paralysis of working capital which threatened to put the company out of business. Fortunately, it was found possible to make some financial arrangements which enabled the concern to solve its difficulties. The point of this actual incident is: Where a firm contemplates a transaction which may result in tying up working capital, it is the better part of good judgment to consult your accountant first.

The very nature of the accountant's training and work impels him to look upon your business with the objective attitude. He is not, like many business men, so near to the forest that he cannot see the trees. You are constantly concerned with increased revenues or other important problems and keep planning on the basis of bigger and better business next month or next year. But one is prone to overlook increasing costs and expenses, which come with increased sales, sometimes far out of proportion to the benefits to be gained. A plant engineer may become enthused with the idea of larger plant facilities and efficiencies, but he may easily overlook the fact that there is little immediate prospect of working the new plant to full capacity, without which the investment may be unprofitable—and possibly ruinous in its ultimate effects. These are problems which come within the compass of program and policy and which should have the full consideration of the accountant as well as the management.

False optimism and overzealousness are two great and common faults in the business world. The lure of a good bargain on a purchase or of the possibility of sudden increased revenues often blinds the business man to possible dangers. The accountant's hand is always on the balance wheel, ready to restrain any move that will cause the concern to follow a course he considers dangerous.

A business executive, speaking recently at a meeting of certified public accountants, stated that "any accountant engaged in a continuous (monthly) audit who permits his client to get into such a condition that he has to compromise with creditors is justifiably open to criticism and withdrawal of patronage." That is rather a strong statement but it exemplifies the trend of opinion of the business community toward the public accountant. He is supposed to be somewhat of a guardian of his client's interests, watching his doings and his progress, and keeping them on the highroad of financial success.

Accountant Can Help Solve Personnel Problems

Personnel problems seem far afield from the scope of professional advice, yet it is a subject upon which the accountant is well qualified to apeak. Office employees usually save their grievances for the accountant and deluge him with their tales of woe. It would be quite an experience to walk into some office and find no complaints whatever. Listening to these stories day in and day out, as well as to the opinions of the management, the accountant is often in a good position to ease any personnel strain, or to pass judgment upon the competence and qualifications of an employee. It is not usual to make any comment unless the case is one of flagrant incompetence and the average employer would do well to seek such discussions. Complaints and criticisms of employees are not to be spread before superiors where they are related in confidence. In the course of discussions with the management, the situation must be approached indirectly, yet brought to their attention.

The subject of personnel problems is merely one of many which, though not directly part of the accountant's sphere of duties, are within his experience and on which he is often able to give sound advice.

Every business today, if it is to function efficiently, must have an accountant coming in monthly, quarterly or even annually. And almost every business does. Yet I dare say that ninety per cent of them fail to get full value for the fees which they pay—not because the accountant is in any way deficient in his duties but rather because the client fails to appreciate the possibilities of the services which the accountant can render. To sum up what I have previously stated—do not withhold information. If you want to get the full benefit of his experience, it is better that you go to the opposite extreme and relate what may seem to be detailed and irrelevant.

Get into the habit of having regular conferences with your accountant. Discuss and compare operating statements, future prospects of your business, present conditions, present trends in the trade. Review your financial problems, your costs, the possibilities of saving in one department or another. Discuss you personnel or labor troubles, or if you contemplate entering into a large contract of any sort bring up that subject. He will be only too eager to listen to you. The discussion itself will clear up many matters which are doubtful or are not clear in your own mind. He may be able to point out possible dangers or difficulties which you may not have foreseen. And if I can leave this one thought, I will feel that this article has justified the valuable space it occupies: Remember that he, above all persons associated with you, is best qualified and is in the best position to counsel and guide you in the conduct of one of your most precious possessions-your business.

The photo-lithographer who works harder and works longer hours than his employees should seriously consider whether or not he should sell his plant and work for some one else. Obviously, the remedy is that he should think more and work less. The world is full of workers—folks that labor and do nothing else. Much more rare is the worker who can mix with his labor a considerable degree of thinking. By this term is not meant mere wistful wishing, but sound, constructive thought that, with the photo-lithographer, means a better organized plant, a better quality of work at less cost, and better prices. Thinking of this sort will do more to create a profitable business than long hours spent doing work for which some one should be employed to do.

A dollar in the bank is worth several invested in machinery and other equipment. The moral of this is not to lock up all your capital in equipment. Better to run your plant overtime for a while, or put it on a two-shift basis, until you are sure that the increase in your business is permanent.



INFRA-RED FOR YOUR BLACK PLATE

THE use of Eastman Infra-Red Plates for making the black printer is a vital step in making corrected four-color separations.

Why Infra-Red? Because most pigments or dyes reflect a high percentage of infra-red rays, while black or brown pigments absorb them. Because, by exposing an infra-red plate to the rays reflected by a color original, behind a filter that stops everything but infra-red, you can get a truer black printer. That means less trouble all along the line, a

quicker "O.K." from the client, and a higher level of craftsmanship.

Ask your dealer about Eastman Infra-Red Plates, for continuous-tone work, and Eastman Infra-Red Process Plates, for halftone work. With them, Eastman has pioneered the application of infrared to process work. By using this material, proper copy, and Wratten Filter No. 88A, you can now get really correct separations for your black printing plates. Write for booklet, The Modern Masking Method of Correct Color Reproduction.

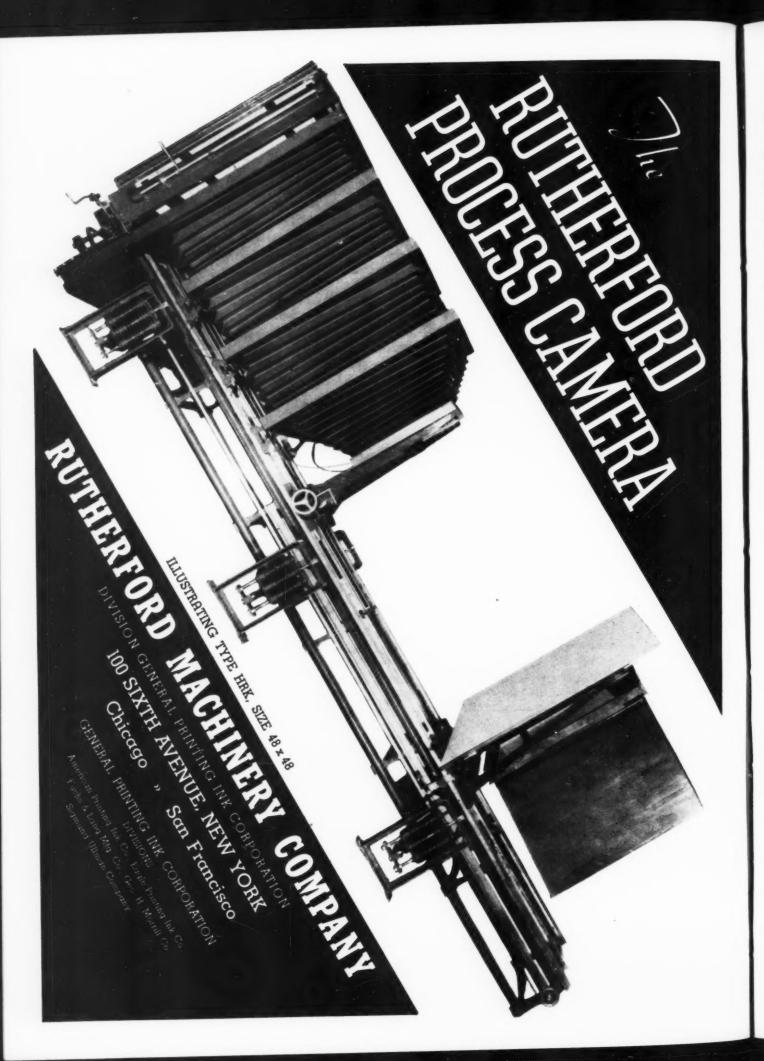
EASTMAN KODAK COMPANY, Graphic Arts Dept., Rochester, N.Y.

nt's

tly, erly
Yet lue ant the ces t I on.

th tediial ne or nly ar in le

is



Lithographers to Meet at White Sulphur Springs

THE Lithographers National Association Convention at White Sulphur Springs, West Virginia, May 11, 12, and 13, will continue the program idea inaugurated last year, when a number of speakers not particularly identified with the industry were featured.

Mr. C. B. Larrabee, well-known writer and managing editor of *Printers' Ink*, will bring to the convention a specialized talk covering the relation of lithography to certain

classes of graphic arts production.

Careful research studies have disclosed that things don't just happen and successes are not accidents. This is being proved daily by these research studies. We understand the lithographers are bringing to this meeting, Mr. A. C. Nielsen, president of the A. C. Nielsen Company, Chicago, with a factual story and convincing charts to illustrate it.

Mr. Turner Jones, vice-president of Coca-Cola Company, in charge of advertising, and chairman of the Advertising Research Committee of the Association of National Advertisers, will be on hand to tell lithographers something about the obligations a lithographer assumes when he undertakes to produce advertising material for a prominent advertiser, and also to bring members up to date on the progress of the Window Display Research which is practically completed.

As usual, the lithographers will have their annual dinner on Thursday evening.

Also, the lithographers devote the Friday following the close of their convention to a golf tournament.

The Lithographers National Association has always extended a cordial invitation to lithographers and others who have a real interest in their convention. All the meetings are open to everybody attending the convention except the one on Wednesday afternoon, which is the annual meeting of the association, attended only by members of the association.

For More Lithographers

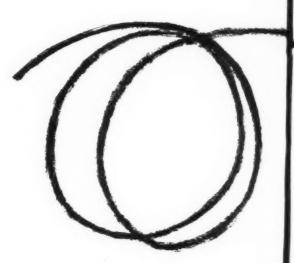
THE Educational Department of the Lithographers National Association is planning an exhibit which will demonstrate the services which it is equipped to render, and the work which has been accomplished since its inauguration in December, 1935. The general objective of this department is to bring before all financial, trade and industrial concerns, and especially advertisers, the artistry, versatility and economy of lithographic productions as a means of stimulating the sales of their products and services, and thereby to procure a wider and greater consideration for lithography as a leading graphic arts process and thus a larger share of their advertising and printing appropriations.



GEORGE E. SOKOLSKY

EORGE E. SOKOLSKY, an international authority Gon economic conditions and industrial topics, will address the opening meeting of the Lithographers National Association Convention (White Sulphur Springs, West Virginia, May 11, 12 and 13). Mr. Sokolsky is today one of the leading lights on the American lecture platform, and has devoted the past several years to the study of the economic situation in this country. As part of this study, Mr. Sokolsky has travelled more than 100,000 miles in our country, visiting nearly every state. During the summer of 1933, he went to London to observe the Economic Conference and to analyze the economic and political position of the United States in relation to the rest of the world. Widely travelled, a past student of contemporary economic conditions in China, Japan and Russia, Mr. Sokolsky brings to his statements an objective point of view which is rare. The Atlantic Monthly, New Outlook, American Magazine, American Mercury and other publications have printed numerous articles by Mr. Sokolsky in this field, and many of these articles have been collected and published under the title "Labor's Fight for Power." Currently, Mr. Sokolsky is contributing a weekly series of two column articles to the New York Herald Tribune, in which he discusses topics of current interest. It is anticipated that his talk at the Lithographers Convention will mark an important milestone in the attempts of a leading national industry to meet and understand the labor problems confronting it today.

The Double Loop



THE double wire loop identifies WIRE-O, the perfect modern binding—the only binding offering the advantages exclusive with the double loop design—

And those advantages are—

FLAT OPENING.

plus ALL PAGES LEVEL TOP AND BOTTOM IN-SURING PERFECT REGISTER ACROSS ANY GUTTER

plus ONE PIECE OR TWO COVERS — EXPOSED OR SEMI-EXPOSED WIRE

plus EXTENSION COVER ALL AROUND

plus FLEXIBILITY WITH TOUGHNESS

plus STRENGTH WITH BEAUTY

plus TWO OR FOUR PAGE INSERTS—ANY SIZE, KIND, COLOR, WEIGHT.

plus ULTRA-SMARTNESS

plus DURABILITY

PLUS these binders, whom we are proud to acknowledge as licensees for WIRE-O, the perfect modern binding.

PLIMPTON MANUFACTURING COMPANY HARTFORD, CONN.

> P. P. KELLOGG & COMPANY SPRINGFIELD, MASS.

EASTERN TABLET CORPORATION ALBANY, N. Y.

> OPTIC BINDERY BALTIMORE, MD.

PHILADELPHIA BINDERY, INCORPORATED
PHILADELPHIA, PA.

W. J. GAGE & COMPANY TORONTO, ONT.

GIBSON & PERIN COMPANY CINCINNATI, OHIO

MICHIGAN BOOKBINDING COMPANY DETROIT, MICH.

ROCHESTER, N. Y.

W. B. CONKEY COMPANY CHICAGO, ILL.

SAMUEL DODSWORTH STATIONERY COMPANY KANSAS CITY, MO.

TRUSSELL

MANUF Poughkeepsi

Spells - Nilvo

DES MOINES, IOWA

FOREST CITY BOOKBINDING COMPANY CLEVELAND, OHIO

AMERICAN BEAUTY COVER COMPANY DALLAS, TEXAS

> WIRE-O BINDING COMPANY NEW YORK, N. Y.

ST. LOUIS, MO.

J. F. TAPLEY COMPANY LONG ISLAND CITY, N. Y.

VILLEMAIRE BROTHERS MONTREAL QUE.

BROOKLYN, N. Y.

SCHWABACHER-FREY COMPANY SAN FRANCISCO, CAL.

> CLARKE & COURTS HOUSTON, TEX.

LEVEY PRINTING COMPANY INDIANAPOLIS, IND. COAST ENVELOPE & LEATHER PRODUCTS COMPANY

LOS ANGELES, CAL.

DAVIS & HENDERSON TORONTO, ONT.

THOS. GROOM & COMPANY

BOSTON, MASS.

WIRE-O BINDING DIVISION
PHILADELPHIA BINDERY, INCORPORATED

PITTSBURGH, PA.

FALL CITY BINDING COMPANY

LOUISVILLE, KY.

SMEAD MANUFACTURING COMPANY

HASTINGS, MINN.

DOBSON-EVANS COMPANY

COLUMBUS, OHIO

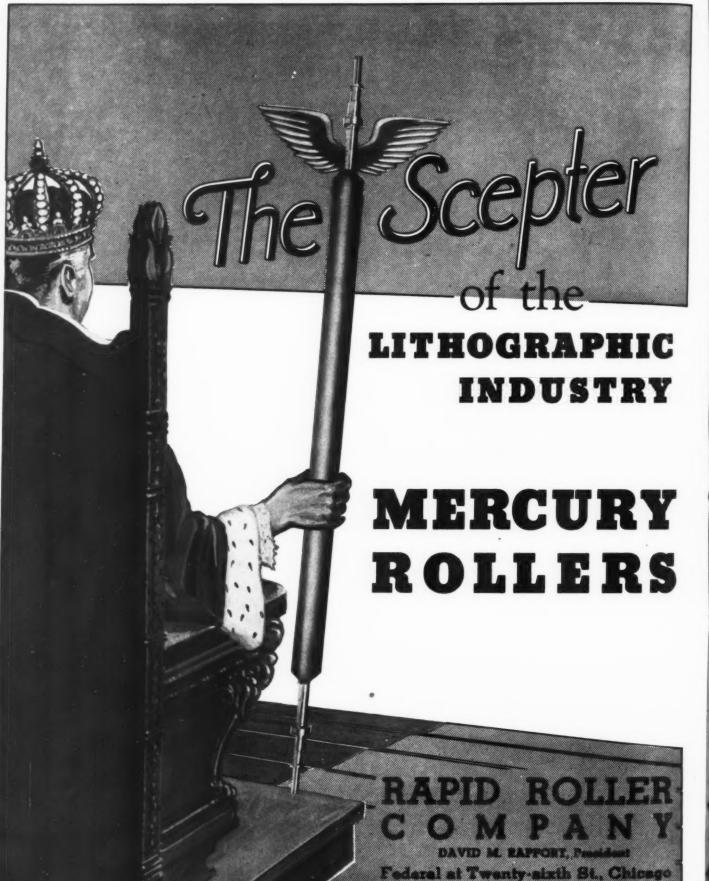
GEORGE SEELMAN & SONS COMPANY

MILWAUKEE, WISC.

SAUGERTIES MANUFACTURING COMPANY

SAUGERTIES, N. Y.

TURING COMPANY
New York



their vion winvent all oth found improvent prevail

Eve ployed pensiv

have e

Par a larg cardbo than a either sheetin

Eve of the multi-of the were of work, in ban mitting production

All to plants ret equiventing in a lity Taking mport ime in thogrammers.

rease, compet

Survey Shows Lithographers Pleased With Service of Spray Guns

Benefits Include Press Speed-Up, Improved Quality of Work and Saving of Slipsheeting Expense

A QUESTIONNAIRE recently addressed to lithography plants which are employing spray guns in their work has produced a unanimous verdict of satisfaction with the results obtained. An appraisal of this new invention by the lithographers themselves should interest all other producers. All of the replying lithographers have found it possible to increase the speed of production or improve the quality of presswork while maintaining the prevailing press speeds. In every case these new devices have eliminated the need for slipsheeting.

Every plant also reported that the cost of the mix employed in the spray gun was negligible, a trifling and inexpensive amount being sufficient for many a large job.

Particularly appreciative were lithographers who handle a large amount of high finish, coated stocks, smooth cardboards and other papers that dry by oxidation rather than absorption. Previously work on such stocks had been either offsetting or was incurring the expense of slip-sheeting.

Every lithographer has experienced success with the use of the spray gun to protect the separate impressions of multi-color jobs without detrimental effect on the tones of the most delicate inks, even on jobs where such inks were overprinting. Those who are handling varnishing work, spot or overall, found the new device very helpful n banishing the old sticking evil completely besides permitting the application of a richer coat of varnish that produces a superior looking finished job.

All this evidence points to the significant fact that those plants in the photo-lithographic industry which have not ret equipped themselves to take advantage of this new avention have an opportunity before them to improve the quality of their work or reduce manufacturing costs. Taking advantage of such improvements is today more amportant for the progressive lithographers than at any time in the past few years. Although the use of photo-ithography is expanding from day to day, the number of concerns entering the field is likewise rapidly on the interesse, a forecast of more and more and more intense competition for the future.

How revolutionary for the lithographic industry is the development of these devices can be seen from a brief glance at the "good old days." Not many years ago the printer first sought to combat offsetting by cutting down the speed of his press. This was followed by various methods of inter-leaving which today are known as "slip-sheeting." Obviously, the former method while it may have corrected the trouble on some jobs, cut down the

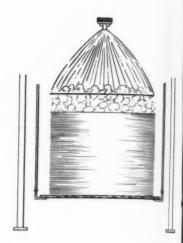


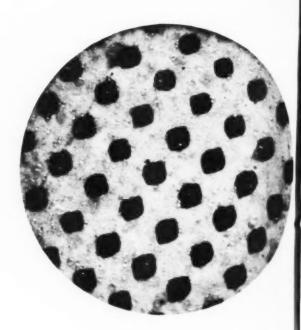
It is no longer necessary to suffer the waste occasioned by offsetting nor the loss due to slipsheeting. New fashioned production includes automatic spray guns.

day's production and the month's profits. The latter not only involved the expense of the news stock employed for the operation but the more costly time of a man or boy to feed the slipsheets at the delivery end of the press. The slipsheeting, while it preserved the printed job from offsetting well enough to insure its acceptance by the customers, made no contribution to the quality of the presswork. The slipsheet performs its function only by acting as a blotter that often dulls the inked impression when it doesn't actually tear away the fresh ink and create spots. Another well-known method of the past was the "shingling" of sheets on trays. Besides the obvious loss of labor hours involved in this method of protecting presswork, much storage space was required and a modest run of 10,000 copies would occupy many cubic feet of trays. When none of the above methods were resorted to, some printers sought to avoid the evil by cutting the amount of ink fed to the rollers, a practice responsible for much of the anemic-looking presswork of the past. Extension deliveries were added to presses in order that the arrival of the printed sheet on the delivery pile might be delayed a few seconds longer. All of these attempted cures for smudging, sticking and offsetting seem like make-shifts when compared with a scientific device like the spray gun which goes to the heart of the problem and for the first time corrects the evil where and when it occurs.

The spray gun is synchronized with the press to puff sit protective spray over each sheet as it reaches the delivery pile, laying down a microscopic layer of powder. While not visible to the naked eye the fine particles produced by the spray hold the following few sheets away from the delicate ink until normal self-drying has taken place. Different printers, depending upon the class of work which they

A diagrammatic illustration of how the spray works. The particles which cushion the descending sheet consist of an odorless and dry hydro-carbon that is harmless because it is a common component of many foodstuffs.





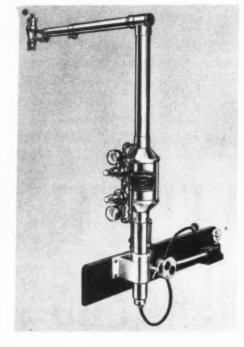
Unretouched photo-micrograph of a halftone that has been sprayed. The halftone dots are magnified 130 times. The small, barely perceptible, grains are the spray particles. They disappear in the normal handling of the job leaving no mark or residue on the printed sheet.

Sho

Note

to lo

API



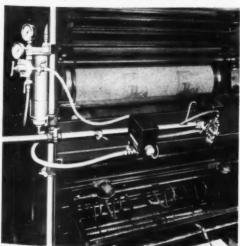
A single portable spray unit with operating unit mounted so as to show method of operation. All controls are within easy reach of press operators.

handle, find various benefits from the use of the spray guns. One lithographer will speed up his press and enjoy a better production record; another will maintain his present press speeds and elate his customers with better quality work. Some lithographers are impressed by the height to which printed or varnished sheets may be attached and the labor saved by avoiding the necessity of frequent handling. Every printer employing the spray guns has enjoyed the advantage of running his press at full speed immediately the job is OK'd. Thereby the old and familiar delay of holding the press idle, after running a lift to check for offsetting, has been relegated to the

Above, a pedestal type ATF Non-Offset Gun set up at a 38x50 Scott Offset Press, showing the small compressor... Entire unit is portable.



Showing the ATF Gun on Harris E. L. 22x34. Note simple, positive control switch attached to lower cylinder. Gun plugs in just like floor lamp. Below, two ATF Guns on one cross-arm.



LESS than 2¢ a thousand!

SLIPSHEETS SHOT FROM ATF NON-OFFSET GUNS SAVE YOU MONEY ON EACH PRESS



Figures kept on ATF Guns (operating normal, intermittent spray, 8 hours each working day, for 8½ months) show that 1 gallon of ATF Non-Offset Mix successfully prevented offsetting on 100,000 to 150,000 impressions on 25x38 inch sheets. A little more than 1c per thousand.

THOUSANDS of printers are getting extreme economy with ATF Non-Offset

Guns. Lithographers should consider this point well. Theirs is the greatest problem of low cost operation in spray equipment. ATF Non-Offset Guns can operate automatically on a short quick spray, a "long dwell" spray, or continuous spray. No matter which method you use, exclusive ATF features permit you to run a job with the minimum of ATF Non-Offset Mix, time and labor. Ventilating equipment is not necessary because ATF Guns are clean . . . more than 20 Guns at one time are operating in pressrooms without expensive blowers and ducts. There are ATF Guns for every type and size of press. All are capable of preventing offsetting, sticking and freezing without slipsheeting, racking, winding or traying. They increase production on all kinds of offset work including boxes, cartons and wrappers.

20-page illustrated "Stop Loss" book showing how and why ATF Guns save you money. Ask your ATF Salesman.

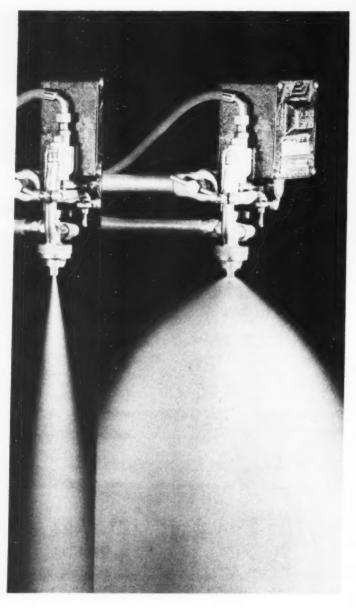
AMERICAN TYPE FOUNDERS 200 ELMORA AVE BRANCHES IN

ter

past. The lithographer who handles many work-and-turn jobs find there is less delay between impressions and idle press time is slashed when the spray gun is used.

The printed quality of color work should experience a great improvement when spray guns are in universal use, since they eliminate the need for doping the inks to prevent offsetting. Equally a beneficiary of the spray guns is the lithographer who employs them to cut down makeready time on jobs which can't afford it by carrying a richer flow of ink than is necessary trusting to the spray gun to eliminate smudging.

At the present writing there is a great variety of spray gun models available for interested lithographers, one to



A thumb screw on the gun head permits easy change in the shape and size of the spray. It can be adjusted while gun and press are operating. Opened widest the spray will cover a form 38" wide.



Offset press equipped with spray guns. Entire unit shown is of portuble type.

suit every make of offset press, size of plant and pressroom conditions. There are portable models that can be transferred with great ease from one press to another as required. There are bracket models that can be attached to the press when floor space is at a premium. Familiar in large pressrooms are permanent installations in batteries, with all the spray guns on the line receiving their air supply from a common compressor which in some cases is even located outside the pressroom. This reduces further the already low per-gun operating expense. The most recent development is a portable model which carries on a pedestal its own small air compressor.

EDITOR'S NOTE:

We are confident that this article will give the lithographic rapher a practical visualization of how the lithographic job can be improved over old methods.

Illustrations 1-2-3-5-6 through courtesy of American Type Founders. Illustration 4 through courtesy of Clean-print, Inc.



or write for Booklet "P"

CLEANPRINT

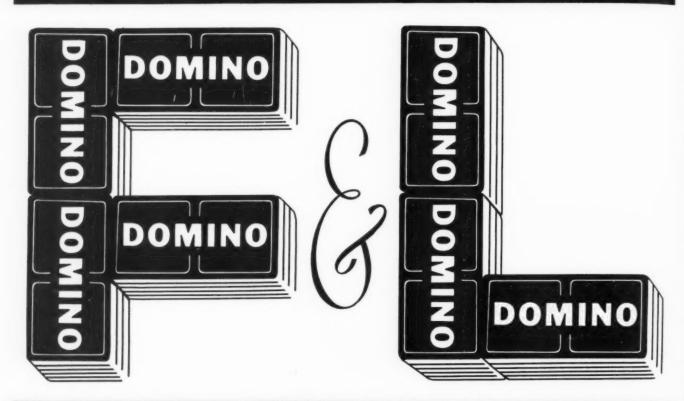
225 VARICK STREET -:- NEW YORK, N. Y.

Some territories still available for Distributors familiar with the Printing Industry

IN LESS THAN FIVE MINUTES A SINGLE UNIT CAN BE CONVERTED INTO A DOUBLE, OR VICE VERSA

PRINT CLEAN WITH CLEANPRINT

Dominant in the Lithographer's Alphabet



Domino Offset Black

A real black of the utmost strength and density. Its clean, sharp printing qualities make it particularly suitable for fine halftone work, where every detail must be retained and still have "punch" in the solids. Requires only a slight addition of F & L Dependable Dryer for THOROUGH OVERNIGHT DRYING. » Order a trial lot and take particular notice of its working properties on the press.

THE FUCHS & LANG MFG. COMPANY

ESTABLISHED 1870

DIVISION . GENERAL PRINTING INK CORPORATION

(EVERYTHING FOR THE LITHOGRAPHER)

100 SIXTH AVENUE . NEW YORK

BOSTON

CHICAGO

CINCINNATI

CLEVELAND

FORT WORTH

of an

select

Mont

It s produ printi

perier lithog printi certai proces The

makir That

consid

of 25°

as goo

proces elimin

Of

expen

graph

readyprodu

> And which s term speed

> nk co

color areas

The

examp

APR

In a

PHILADELPHIA

ST. LOUIS

SAN FRANCISCO

LOS ANGELES

BOOST YOUR BUSINESS

HE above title, as well as what will here be said, came to mind when examining a number of pieces of an advertising campaign that is bringing results to a letterpress printer in New York City, William E. Rudge's Sons. This organization sends out every month to a selected list a booklet, folder, or some other form of printed matter which it has produced for a customer. The item is enclosed in a folder entitled "The Job of the Month," and on the folder is printed a brief statement about the job, calling attention to its interesting features, and emphasizing the ability of the printer to produce unusually effective printed advertising.

It seems to us that here is an idea that could be used by producers of photo-lithography. Too many buyers of printing are not familiar with this process, or have become prejudiced against it because of some unfortunate experience. It would be worth while for every photolithographer to keep continually reminding the buyers of printing that the process has tremendous advantages for certain kinds of work as compared with other reproduction

processes.

The photo-lithographer should stress the fact that by this process it is not necessary to use coated paper when making reproductions of photographs or washed drawings. That for a large edition, where the postage charge is a considerable item, a 80-pound offset paper has equal or greater bulk than 100-pound coated. This means not only a considerable saving on postage charges, but the saving of 25% on the weight of paper required. Of course, too, a satisfactory offset paper does not cost as much per pound as good grades of coated stocks.

In addition, the photo-lithographer should continually call attention to the fact that with the photo-lithographic process the charges for engraving and electrotyping are

Of course these are, to a certain extent, offset by the expense of making the negative and reproducing the mage on the zinc or aluminum plate, but with many classes of work this expense item is in favor of the lithographic process. Furthermore, with the photo-lithographic process, there is no long and expensive makeready—it usually requires only a few minutes to start production after the printing-plate has been attached to the press.

Another advantage of the photo-lithographic process which should appeal to the buyer of printing is that what s termed "heavy work" can often be printed at full peed without the necessity of slipsheeting or reducing the nk coverage. This is especially true of large areas of solid color or halftones or line illustrations with many solid

areas which must be run in full color.

Then there is the advantage of being able to enlarge or reduce type matter to an almost unlimited extent. For example, the customer may desire a large poster or broad-

side on which there is a considerable amount of lettering. To hand-letter such a job would not only be very expensive, but unsatisfactory unless the work was entrusted to an unusually skilled, and therefore expensive, designer. To set the job in type and print it letterpress may also be out of the question, since few printers have large quantities of large type, and if they do have such type, the faces available are very limited, and usually old-fashioned in design. When confronted with such a problem, the photolithographer can have the job set in smaller type, in any type-face desired, and then enlarge it to the proper size.

The foregoing also applies to anything that can be photographed-line or wash drawings, charts, photo-

graphs, etc.

Then, too, the photo-lithographic process has the advantage of being able to use nearly every kind of paper. Consider, for example, a catalogue or price-list which must show photographic reproductions yet will be constantly handled by persons with wet or soiled fingers. Under such conditions, the use of coated paper, necessary to secure satisfactory results by the letterpress method, is not at all desirable. With the photo-lithographic process, however, it is possible to use strong paper such as a highgrade bond which will withstand much abuse. In this connection the photo-lithographer should emphasize that by his method of printing it is possible to print cook-books, with photographic illustrations in one or more colors, on paper that will not soil readily even when constantly referred to by persons with soiled or greasy fingers.

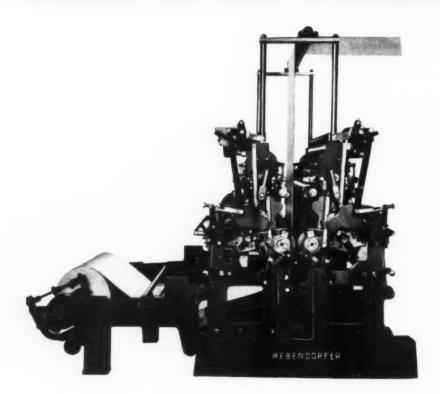
There are a great many catalogues which lend themselves especially well to printing by the photo-lithographic process. Not only can they be printed on strong uncoated offset paper of lighter weight and greater bulk than coated paper, but it is a very simple matter to reproduce from the same proofs used for the catalogue what is termed "pony editions." This means an exact duplicate of the larger catalogue but in much smaller size, printed on very thin paper, and intended for widespread distribution at a low postage cost, while the circulation of the larger catalogue can be limited to certain important customers. Even these customers will frequently welcome and make use of a number of copies of the pony edition, to be distributed to department heads.

Another advantage of the photo-lithographic process which should be impressed upon buyers of printing is its adaptability to the reproduction of beautiful works of art, such as etchings, pencil drawings, and work of that character, which, by means of tints or additional colors, and printed on hand-made or other expensive papers, produce effects that approximate, or frequently are better, than the originals.

The foregoing are only a few suggestions as to how the photo-lithographer can boost his business. Nothing has

(Continued on page 61)

The Small Town Newspaper Press of the Future



WEBENDORFER

Sheet Offset Sheet Size 12 × 18

17 x 99

22 × 26

22 x 29

Letter Press

Little 10 x 15 Giant

Web Unit Offset

11 × 17

17 x 22

22 x 34 and up BUILT UPON UNIT

Optional delivery newspaper folder-magazine folder-flat sheet delivery or other special attachments.

Offering the publisher all the facilities of offset, news pictures and individualistic make-up as well as a more metropolitan style in local advertising copy. Priced so every publisher can afford. Investigate.

AMERICAN MADE BY WEBENDORFER-WILLS CO., Inc.

Builders of Printing Machinery for Over Thirty years

MOUNT VERNON

NEW YORK, U.S.A.

Exhibitor National Printing & Allied Industries Exposition, Coliseum, Chicago, June 12th to June 20th inclusive.

The Masking Method of Color Reproductions

DENSITOMETERS have been in use for a number of years in various phases of photographic research. The early types were made to measure only the densities of transparencies by transmitted light. A short time ago, however, the Research Laboratories of the Eastman Kodak Company perfected an instrument which would not only measure densities of materials transmitting light but also of those materials which reflected light as well. In adapting this instrument for use in the graphic arts it was intended primarily for the use of the color worker, but many uses have been found for it in straight black and white production.

A large number of these instruments are already in use in the graphic arts trade. Such a large and growing interest has been shown in this instrument by the photo-mechanical trades for the past year or so that it was felt desirable to publish more general information. Therefore, we shall endeavor to put into non-technical terms a description of the densitometer, and the uses to which it is put in photomechanical reproduction.

The densitometer in appearance is a small black box with the head, hinged, mounted like a conningtower on top. This head is adjustable, being in one position for reading transmitted densities, and extended to another for reading reflected densities. At the right side is a handle for operating the light switch. Just above and placed so both may be operated with one hand, is the slightly protruding edge of the disc which carries the separate scales for transmitted and reflected densities, and the circular optical wedge. Inside the densitometer is the light source, in this case a 32 c. p. automobile headlight bulb, just above is the circular optical wedge, and finally part of the optical system. The head contains the eyepiece, through which the readings are made and the remainder of the optical system. A very important part of this optical system is a surface mirror, reflecting side up, with the silver removed from a small central portion. Into the eyepiece is built a filter-ring for use in three-color work. The field covered is circular and 4 mm. in diameter for the transmission and reflection type as against 0.5 mm. diameter for the straight transmission type densitometers. The size of the field is important in the graphic arts as it effects an integration of field so that it is possible to read densities in either con-

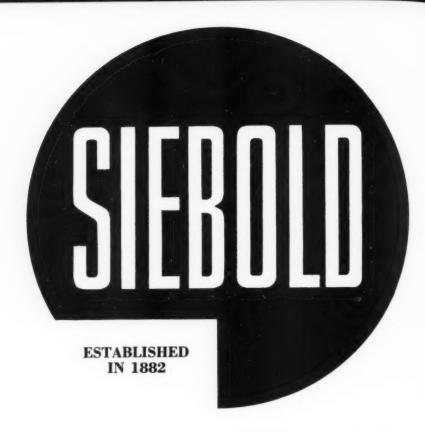


The Densitometer in Use

tinuous tone or halftone subjects. This last point is essential as it enables us to check the densities in any step of the process from the original copy and its negative, right through and including the finished plate and the final proof. Transmission densities may be read 23/4 inches in from the edge of the plate or film and plates up to 1/4 inch in thickness may be accommodated. Reflection densities may be read at any point on even the largest subjects by removing the densitometer from its base. Such densities are possible for points up to 5 inches from the edge when the instrument is located on its base.

Looking through the eyepiece two fields of differing shades of gray are visible, one within the other. The inner field is formed by a direct beam of light passing through the clear spot in the reflecting mirror. The outer field is formed by a beam of light passing through the reflecting optical system and finally reflected to the mirror appearing around the clear spot. By properly adjusting the optical wedge the fields may be balanced, i. e., made to appear of the same shade of gray. Then the density may be read directly from the scale required. In measuring transmission densities the material is placed under the eyepiece in the direct beam of light. In this case the outer field remains constant and the inner field corrected to secure a balance. To measure

OVER A HALF CENTURY OF SERVICE



INKS

Our reputation in the manufacturing of lithographic, offset and printing inks has withstood the test of the most critical user and therefore we are able to give our customers greater value and stronger color for the money today than ever before, after all impressions per pound means more than mere price. There is no problem a problem to Siebold. Supply Price List, Offset and Safety Ink Specimen Books upon request.

SIEBOLD'S SAFETY INK

At a comparatively small cost by printing in pantographic design or otherwise you can manufacture your own safety paper, using any type of litho offset plate including dampers as this is not a water sensitive ink.

PHOTO LITHO CHEMICALS

Each item has been individually tested and found to be best suited for the PHOTO OFFSET LITHOGRAPHER.

SIEBOLD'S ROLLER DEPARTMENT

Fully equipped to supply your wants such as Smooth and Grain Leather Rollers, Molleton and Muslin Covers, also full selection of Hand Rollers, both Rubber and Leather for transferer's and prover's use. These are of our own manufacture and our half century reputation is in back of every one.

J. H. & G. B. SIEBOLD, INC.

Lithographers' Supplies

Office:

47-49 WATTS STREET New York, N. Y. Factory:

99-105 SIXTH AVENUE New York, N. Y.

Telephones: WAlker 5-9474-5-6

reflection densities the eyepiece is trained on the surface of the material which is placed under the densitometer. Then the inner field remains constant, and the balance reached by the outer. In the former case, the optical wedge is placed in the beam of light passing through the transmission density. In the latter it is in the beam not reflected from the material. The computation and calibration of the density scales requires great skill and accuracy and should only be attempted by one thoroughly familiar with, and equipped to do, this type of work.

Thus simplified the instrument is not difficult to use. Properly used, the densitometer is a very valuable aid to anyone engaged in graphic arts work.

The uses of the densitometer in photographic research and production are many and varied. However, these are more of a scientific rather than of practical interest. In actual practice, we shall consider two very important uses for the densitometer. The first use is in the balancing of color separation negatives, and the second, which is somewhat related, is determining printing exposures from negatives. Needless to say, there are many variations and ramifications of these two which the individual worker must work out for himself.

In balancing a set of separation negatives, the important value to be considered is density range. This, as the name implies, is the range between the highest and lowest densities present in the material being measured and, roughly speaking, represents the contrast of that particular material. Of course, the ideally balanced set of negatives would have not only the same density range, but the same densities as well. In practice this is seldom, if ever, attained, and, generally speaking, there is considerable variation in density ranges as well. As a result, a great deal of hand work is required to correct for the inequalities.

The primary object of the densitometer is to give us figures which enable us to make the necessary corrections in our negatives tending toward arriving at equal density ranges for all three. There are very few, if any, persons engaged in this type of work who can tell by visual inspection which of two separation negatives has the greater density range. Thus, we can see that any correction without a densitometer must of necessity be of rather a hit or miss character. A new negative can be made in a short time which may save several hours or even days of work in correcting the printing plate or positives.

The use of a densitometer in determining printing exposures will save much time which would normally be required in determining the printing exposure of the second and third separation negatives by the trial and error method. The procedure is as follows:

- 1. Read and record the density in the negative corresponding to the white step on the neutral gray scale or a white in the original.
- 2. Find the correct exposure by trial for any one negative.
- 3. Calculate the difference in density between the negative of known exposure and the unknown. This is done simply by subtraction.
- 4. In the "density-Percent Transmission Chart," which is provided with the densitometer, locate the density difference found in step "3," with the corresponding percent transmission.
- 5. The percent transmission, corresponding to the difference in density, is a multiplying factor, used either to increase or decrease the exposure as the case may be.

Example: The densitometer is used for determining the printing times for color separation negatives with wash-off relief film. The following assumes that the conditions of lighting are constant and that only the time of exposure is varied.

	Red Filter	Green Filter	Blue Filter
Density in Negative			
corresponding to			
white in original	1.80	1.98	1.50
Exposure Time	IO sec.	15 sec.	5 sec.
	(by trial)	(calculated)	(calculated)

- (a) The .18 difference in density between the red and green filter negatives corresponds to 66% transmission which means that the green filter negative transmits only 66/100 as much light, therefore the exposure needed for the red filter negative should be multiplied by 100/66 or $100/66 \times 10 = 15$ seconds.
- (b) The .3 difference in density between red and blue filter negatives corresponds to 50% transmission; the red filter negative transmits only 50% as much light as the blue filter negative; therefore the exposure for the blue filter negative would be $50/100 \times 10 = 5$ seconds.

In their booklet The Modern Masking Method of Correct Color Reproduction, which may be had on request, the Eastman Kodak Company publishes further details on the densitometer, as well as instructions for the modern masking method which is their system of negative correction.

BE SURE YOU ARE RIGHT

WENTY odd years ago, the compiler of these paragraphs happened to be exasperated almost beyond endurance as a result of many serious errors in an important job of printing for which he was responsible. Whether it be letterpress printing or photo-lithography, mistakes continue to happen today, just as they did a quarter of a century ago. A recent experience with an important job of lithography is proof of the foregoing. Great care was taken in trimming to the correct size, and pasting into exact position, the blue-prints of many photographs which were to appear on the text-pages of a booklet. The trade plant that did the composition was also instructed to use great care so that perfect reproduction proofs would be furnished the photo-lithographer. It was thought every possibility of error had been guarded against. Confident that every contingency was provided against, the job was dismissed from the mind and a pressing business trip was made to a distant city.

A few weeks later, when a dozen completed copies were received, the envelope was opened with pleasing anticipations—which were instantly shattered. There is no need to enumerate all the things that went wrong. Nor was it worth while to attempt to find out why the errors crept in. The job passed through so many different hands that it would have been a waste of time to attempt to locate all who were responsible for the various mistakes, the author included for not postponing the business trip until the sheets were in the bindery and bound copies inspected.

With the taking on of the responsibility of another important photo-lithographic job, which it is hoped will be perfect in every detail, there came to mind that catalog which was so poorly printed in the summer of 1914, and some reflections that were then put on paper, and later appeared in print, on the tendency of everybody to make mistakes.

As was said at that time, and with which everybody will agree, this would be a much more pleasant world in which to live, most of our troubles would vanish, everybody would probably be happy and contented, life would hold its full measure of enjoyment—if we could but avoid making mistakes. Indeed, it is not too much to say that if we could but appreciably reduce the number of errors we make, if we would all more frequently do the right thing at the right time, the millennium would be at hand.

Seldom is a mistake made intentionally. Despite his other shortcomings, the average man wishes to do his work correctly. No one likes to be censured, even by his own conscience, or to perform a task a second time. But with every incentive for accuracy, with a full knowledge of all the penalties attached to errors, too often we do our work in a hasty, careless, slipshod manner, trusting to luck that it will be correct, or at least pass muster.

While at first glance it would seem all errors have a

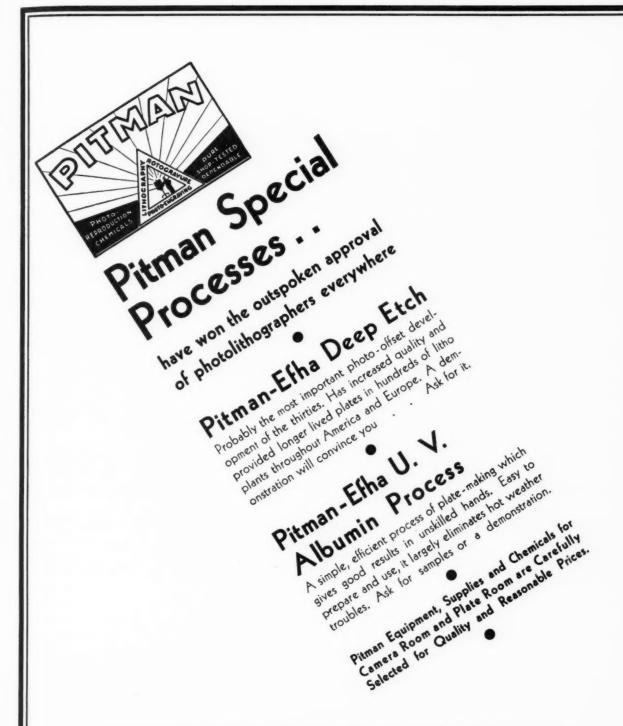
different cause, if the reason for every mistake is traced back to its source almost invariably it will be found that it was due to lack of foresight, to a quick decision based on insufficient or incorrect knowledge. David Crockett's advice, "Be sure you are right, then go ahead," is a maxim we should all keep constantly in mind. Intuitions, snap judgments—these are the forerunners of blunders. The man who first studies carefully a task is sure to produce a much better result with less effort than if he plunges into it without a definite plan.

In the business world, as in every other field, hasty decisions are responsible for more blunders than any other one cause. Nor are such blunders confined to the privates in the army of industry. Harrington Emerson, a clear thinker, in a worthwhile book dealing with efficiency, enumerated several of the gigantic mistakes made by prominent railroad officials. A striking instance of not counting the cost when making a decision was the act of a transcontinental railroad in eliminating a gravity grade. This cost over \$5,000,000, entailing a fixed charge forever of \$1,000 a day. The operating cost of the helper locomotives to handle all the traffic over this grade has never exceeded \$200 a day. Because one man made a hasty decision, this railroad will always be saddled with an unnecessary daily expense of at least \$800.

As further showing the need of deliberation when making a decision, another instance, also dealing with a railroad, may be cited from Mr. Emerson's book. This railroad was troubled by the flooding and washing away of its line on the slope of a foothill. Engineers recommended the relocation of the line at a cost of \$800,000. Before deciding, the president thought it best to make a personal investigation. With an experienced roadmaster for a companion, a day was spent tramping over the hills and debating the matter. It was then decided to build wing-ditches so as to divert the surface water around the hill and away from the road-bed, the remedy costing less than \$1,000 and proving a complete success.

These two examples of mistaken judgment are here mentioned because they parallel, in greater degree, errors so frequently to be found in the photo-lithographic industry. Consider the \$5,000,000 expenditure to abolish a gravity grade, which has for years, and will forever, remain an overhead charge against the operation of that railroad. Would it not be worth while, Mr. Lithographer, to study the overhead charges in your plant? Do not many of the items represent unwise expenditures for machinery and other equipment, bought in haste to supply a temporary need, that in fixed charges are costing more than they save? Moreover if the money thus spent was available, could it not be used to advantage in adding to the equipment of other departments which do not show sufficient profit?

The action of the canny railroad president who refused



HAROLD M. PITMAN CO

LITHOGRAPHIC EQUIPMENT AND SUPPLY DIVISION JERSEY CITY, NEW JERSEY . . . 150 BAY STREET CHICAGO, ILLINOIS . 51st AVENUE & 33rd STREET

Pacific Coast Representative: G. GENNERT, Inc., 1153 Wall St., Los Angeles, Cal. Canadian Representative: LATIMER, Ltd., 7 Widmer Street, Toronto, Canada

that ed on cett's axim

The ice a

into

asty

ther ates lear

enu-

mi-

ting

ins-

his of ves ded his

illy

ail-

il-

ed ore nal a nd gill

re

ic h

t

MOLLETON

<u>flannel</u>

RUBBER BLANKETS

SEWN MOLLETON & FLANNEL COVERS

SEAMLESS MOLLETON & FLANNEL COVERS

DAMPERS . . LEATHER ROLLERS

HAND ROLLERS . . . SCRAPER LEATHER

SEAMLESS FOUNTAIN ROLLER COVERS

ROBERTS & PORTER

INCORPORATED

ESTABLISHED IN THE LITHO SUPPLY BUSINESS OVER FORTY YEARS

New York: 100 Lafayette St., Phone: CAnal 6-1646 Chicago: 402 S. Market St., Phone: WABash 6935

CANADIAN AGENT: CANADIAN FINE COLOR CO., 240 LOGAN AVE., TORONTO

to spend \$800,000 until he had himself investigated the matter shows an attitude of mind many lithographers should emulate. A customer tells you that John Jones, your competitor down the street, will print for \$500 a job which your estimate shows is worth \$750. If you have not already done so, now is the time to get acquainted with Mr. Jones. This will be an easy matter if you happen to both belong to the National Association of Photo-Lithographers. It is more than probable you will find Jones just the sort of man you are. Talk with him friendly and frankly and the chances are he will reciprocate. Show him your estimate, explain how you have planned to produce the job, and it is likely that he will also show you his figures and how he intends to manufacture it. It is quite possible his conception of what the customer wants is entirely different from yours, or he was given specifications that differ in important details from those you received.

Frank discussions with competitors, such as the one just suggested, will benefit all concerned. There are no secrets in the photo-lithographic industry—at least you should know, as well as do any of your competitors, the cost of every operation. And your plant should be as well equipped and well managed as that of John Jones. Benjamin Franklin, who prospered as a printer long before lithography was discovered, never deceived a customer, but what is more important from a business point of view, never deceived himself. One of the wisest of his many sayings was that in the business affairs of this world men are not saved by faith but by want of it. Therefore, you should not accept without question the statement by a customer that John Jones will produce for \$500 the same job your cost figures show is worth \$750.

A most prolific source of trouble in the photo-lithographic business, the chief cause of so many annoying and expensive errors, is the manner in which so much work is handled. The customer is usually guilty of the first and most important mistake, which is the postponing of the placing of the order as long as possible, and then expecting an almost impossible date of delivery. This means that the job must be put through the plant with the utmost haste. And haste, as every experienced lithographer is aware, means increasing the liability of errors.

While the work may pass through the plant in a satisfactory way and be delivered on time, a score of things may happen, any of which will result in serious errors, or run up the cost until the job shows a loss instead of a profit. While it is not possible to guard against every error, nearly all can be eliminated by careful planning and allowing sufficient time for each operation.

To mention only one of the many other annoying difficulties confronting the photo-lithographer, consider the problem of register when a job is printed in more than a single color—unless the equipment includes a two-color press. Few of the smaller photo-lithographic plants have such presses, or humidity control in their press-rooms and paper-seasoning devices. Without these aids, it is almost impossible to obtain perfect register when the weather conditions are not right. Therefore, the lithographer should not make the mistake of attempting to do color work unless conditions are right, or he has the equipment to prevent the paper from swelling or shrinking.

It has been the observation of many that lithographers should heed more than they do another of Franklin's wise sayings, which is to the effect that a man should drive his business and not permit it to drive him. If instead of keeping himself constantly buried in a mass of petty details, the lithographer would meet with much greater success if he would concern himself more with the larger problems of his business. The first step in that direction is to build up a system which will automatically take care of small details, thus insuring that work will pass through his plant with a minimum of effort and the least possibility of error. Relieved of these time-consuming tasks he will then be in a position to make more frequent contacts with customers and competitors. In the business world a man can not have too many friends and acquaintances. With his plant so organized that work is produced without error, the chief executive would have time to not only plan how to better serve his customers, but also to constantly meet prospective buyers of his product. This is the best and most sound way to attain success. Certainly, the lithographer who depends on low prices, large volume, and indifferent quality of work, even if he does attain some measure of financial success, it not going to make many friends or be a credit to the industry.

A T one time, when we were examining the drawings of a new type-face Fred Goudy had just completed, we began to wonder which of the twenty-six letters of the roman alphabet was the most important, having already demonstrated to our satisfaction that the one most difficult to draw was the "g". As doubtless everyone is aware, the most useful of these twenty-six soldiers of learning is the "e"—useful because it does more work than any other. If you should happen to glance at the shallow tray of wood in which type is stored, and from which type is set, you will note that the compartment assigned to that character is much larger than those allotted to the other letters. The letter "e" is an unfortunate letter, however, since it is always out of cash, forever in debt, never out of danger, and in hell all the time.

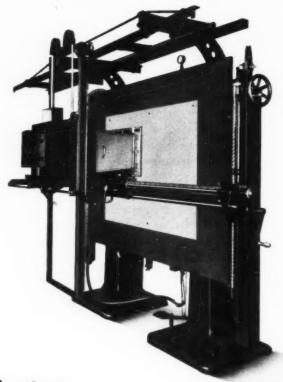
But those who thus traduce the letter "e" should not forget that it is never in war, always in peace, is the beginning or existence, and the end of trouble. Without it there would be no meat, no life, no heaven; no wine or women, both so necessary to make song enjoyable. It is the center of honesty, makes love perfect, is the beginning of eternity, the end of time and space, the beginning of every end, and the end of every place. Without it there could be no editors, writers, photo-lithographers, or even wives or children.

NEW VERTICAL TYPE

PHOTO-COMPOSING MACHINE

Made In Three Sizes

				Size	of	Plate	n			Wo	rk	Area
Model M-H	2			 44	×	50"				30	×	43"
Model M-H	3			 58	x	68"		 		41	x	54"
Model M-H	4			 64	x	80"		 		46	X	68"



the

fac paj

ink sole The

tion

pen

sho

larg

ofte

atti

tion

has

dist

pap

ful

tone

tope

incr

blace brig according blace for yello in particular ever

edge

AP

Eight Points Of Advantage

Horizontal and vertical movement of Negative Holder to any predetermined position is easy, convenient and positively accurate to within one one-thousandth of an inch.

Housing containing the lamp is easily moved into and away from exposure position and also moved back out of the way.

The Universal Register Device, specially designed for use with this machine, is unique because any size negative from 9 x 11 inches to 28 x 34 inches may be registered without adjustment of the Device.

Great convenience in handling and placing Negative Holders in position—especially when the desired position is at the center or back edge of the plate.

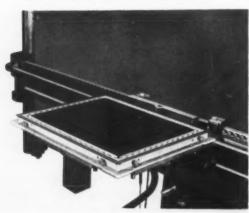
The Negative Holder will carry Vacuum of about 20 inches, assuring positive contact while exposure is being made.

Non-Embossing Negative Holder can be positioned with any of its four sides in head position, with no change except to check the register for the new position.

Negative Holder can be tilted down to horizontal position while on the machine without disturbing its register, to permit the attachment and the manipulation of masks and for retouching or opaquing.

The New Non-Embossing Negative Holder is arranged to hold thick or thin glass, and the change from one thickness of glass to the other is quickly and easily made.

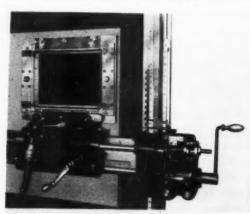
Negative Holder tilted toward operator for masking, and for shifting Masks in producing intaglio or deep-etch plates



Micrometer Vertical Positioning Mechanism and Negative Center Indicator



Negative Holder Saddle and Micrometer Horizontal Positioning Mechanism — note permanent position of vacuum line for all'size Holders



LANSTON MONOTYPE MACHINE COMPANY

Monotype Building, 24th at Locust Street, Philadelphia, Penna.

CHOOSING THE RIGHT COLOR SCHEME

WHAT color scheme shall we use? White paper, or some of the many colored papers now available? Black ink, or one or more of the hundreds of colored inks to be found in an ink-maker's specimen-book? A study of the job will nearly always give the answer to these questions. Dignity, simplicity, and economy means black ink on white paper. Grade for grade, white paper costs less than colored paper. This is also true of inks, black inks costing less than colored inks. The reason for this is, of course, that colored inks and colored papers are manufactured in smaller quantities as compared with white

papers and black inks, hence must be sold at higher prices. Then, too, the use of colored inks requires a thorough wash-up of the press, an additional item of expense quite apparent when the run is short, but of little or no importance with large editions.

But black ink and white paper are so often used that they attract little attention, unless the job has other features of distinction. These may be usually good paper and very careful presswork, halftones of surpassing excellence, striking

topography or design, etc. Any of these, however, may increase the cost of the job far beyond what would be the additional expense if colored paper or ink was used.

If, however, and assuming that all the elements in a black and white job are satisfactory, yet the result may be too somber. A touch of orange or vermilion will serve to brighten the pages. Frequently ivory or india paper will accomplish the same result at less cost.

But with lithographing of an advertising nature the choice of colors should not be always confided to red and black on white paper, satisfactory as is such a color scheme for many purposes. Browns, blues, greens, purples, yellows, with their various shades and combinations, either in papers or inks, can all be used. One should have, however, before attempting an unusual color scheme, either a good model to follow or a fairly comprehensive knowledge of color as it relates to lithography. Hundreds of

books, and probably thousands of magazine articles, have been written on the subject of color, and an almost endless variety of color schemes have been devised. The late A. H. Munsell, of Boston, spent a lifetime in perfecting his system of color. A handsome book, designed by T. M. Cleland and issued in 1921 by the Strathmore Paper Company, shows the application of the Munsell system to papers and printing inks.

As this treatise points out, color has three elements— Hue, Value, and Chroma. To quote Professor Munsell, hue is a "quality by which we distinguish one color from

From A Grammar of Color. Courtesy Strathmore Paper Company.
THE MUNSELL "COLOR SPHERE"

As the above diagram makes clear, according to the Munsell system, color has "a vertical scale of light values, a horizontal scale of chromas, and a circular scale of hues; and since these are all in decimal divisions, it becomes easy to make it a permanent mental image in which to see all color relations."

another, as red from a yellow, a green, a blue, or a purple," but this does not tell us whether a color is dark or light, strong or weak. Another definition is therefore required, which Munsell defined as Value—"a quality by which we distinguish a light color from a dark one." These two definitions do not fully describe a color, hence we must have a third term that will describe its strength-Chroma. With these definitions, and with what Munsell calls, "a color sphere," one can accurately

describe any color, and with this information, as well as the examples shown in the Strathmore book, work out color schemes that will be pleasing and harmonious.

But color is too broad a subject to be confided to the straight-jacket of any system, no matter how scientific and logical it may be. To every person color has a different meaning, and our ideas as to colors are constantly changing. The colors that pleased us when we were children—the strong, raw reds and blues on the toys with which we played—no longer please us. As we grow older, we are more inclined toward the softer shades.

There are other preferences as to color. Women, especially younger women, are more fond of bright colors than men of the same age. While the youth of twenty or less may buy the brightest neckties the haberdasher sells, not yet has he reached the point when he will stain his

(Continued on page 51)

Rapid Plate-Coating



QUICK ..

strong and sturdy

The quality of your press-plate actually begins with the whirler or plate-coating machine.

The evenness and dependability of your coating depend just as much on the whirler as on your care in compounding your formula. Consistency . . . perfect control of speeds . . . drying facilities—all must be dependable and certain.

The Wesel Whirler has direct-connected, geared-head motor drive; no friction drive. Variable speed regulator is electrically controlled.

Ball-bearing construction, using a minimum of current.

Automatic air-circulating device that does not attract dust from outside—Rustless alloy steel drum (not tin). Aluminum alloy revolving

Convenient drain pipe connections for ease in installation. Washing spray and also perforated pipe for cleaning housing. All pipes of solid copper.

Genuine Chromalox drying system, assuring rapid and consistent preparation at minimum cost; pilot light signal.

Adjustable legs for uneven floors to assure a level position. All controls available from one position. Lid can be raised or lowered instantly and without effort.

Can be seen in our Chicago and New York Display Rooms.

WESEL MANUFACTURING COMPANY

Factory: SCRANTON, PENNSYLVANIA

NEW YORK: 468 4th Ave. . CHICAGO: 201 N. Wells Bldg . SAN FRANCISCO: 431 Clay St.

PHOTO-COMPOSING

- •Write us for information on the new Photo-Composing Machines. The entire machine is built into one integral unit: All electrical equipment, lighting system, and mechanism combined within a single machine, thus simplifying operation, control, and maintenance.
- Can be installed in a fraction of the time required by former machines.
- •The outstanding feature is simplicity of operation. Control of this machine is easily learned and mastered. Made in four standard sizes.

finge

hue.

We a

Italia

inclin

also

color

Sout

stron

peop

Cana

here

print

brou

AP

Th

•We manufacture a complete line of offset plate-making equipment in all standard sizes, both large and small. Write for details on cameras, vacuum printing equipment, plate-coating machines, optical and lighting equipment.



WESEL

THE PHOTO-LITHOGRAPHER

MOVING ... on and after May 1st, 1937 our new plant address will be:

215 WEST OHIO STREET

"JUST FIVE BLOCKS NORTH OF THE LOOP"

In keeping with the progress that is being made by the lithographic industry, our new modern factory equipped with new precisional machinery is another forward step to produce better equipment and give better service.

The "Valette" offset plate making products are successfully operating in many lithograph plants and represent today's outstanding equipment value—the latest type—efficient and practical in operation.

We are indeed grateful and want to extend our thanks to the lithographic industry for making our steady advancement possible.

LITHO EQUIPMENT & SUPPLY CO.

215 West Ohio Street, Chicago, Illinois

EASTERN REPRESENTATIVE: GEORGE R. SWART, 461 EIGHTH AVE., NEW YORK

CHOOSING THE RIGHT COLOR SCHEME

(Continued from page 49)

fingernails a startling crimson, and paint his lips the same hue. There are national and racial preferences as to color. We all know the fondness of our negro neighbors for bright colors. Those people who live near the Mediterranean-Italians, Spaniards, Greeks, and their descendents—are inclined toward the bright hues of warm colors. This is also true of certain sections of the United States. All these factors should be kept in mind when planning a color scheme for any kind of advertising. If it is to be distributed in California, or in any of the states in the South and Southwest, then splash on the reds and yellows and green with a generous hand. But don't attempt such strong color schemes with booklets intended to appeal to people in New England, in the states in the North, or in Canada. There may be exceptions, but it is probable that here softer colors may be more effective.

The subject of the advertising piece may give a clue to the color scheme. Color may be one of the important factors in the thing advertised. Assume it is blue, then print the object in the exact shade of blue, and enliven this color by a warm complementary, using the bright color to emphasize any points in the text that need to be brought out. Instead of a picture in blue, perhaps the desired result can be obtained with a black halftone printed over a blue tint-block.

The foregoing brings up the question as to harmonious or contrasting color schemes. Assume it is a booklet with a dark blue cover, end-leaves of a lighter shade, a light blue text paper, and with the type and illustrations printed in the right shade of blue ink. You may rightly consider that you have achieved a beautiful and artistic effect. But if the booklet is one that is to appeal to Tom, Dick and Harry, then the color scheme may be too "flat" and lacking in "punch." The solution is to add a few touches of bright color. Keep in mind, however, that too much of the bright or warm color will degrade the booklet and lessen its effectiveness. The recipient is then more likely to be attracted by the colors, and overlook the message the booklet conveys.

Summed up, the use of color for advertising booklets should be governed by common sense. Avoid the strong, raw colors, or if they must be used, use them in moderation. Keep in mind the class of people who will read the booklet. Consider also the character of the thing advertised. Carefully weigh all these factors. Then common sense will tell you what color scheme to use.



4 Offset Mediums for Offset Needs!

Th

Ru

cat

chi

are

red

reg

col

reg

usu

rul ter

fro oth offs ind and

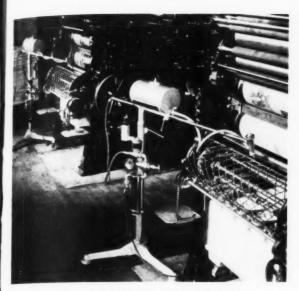
A

- 1 HAMMER HALFTONE OFFSET FILM NON-HALATION produces clean, sharp, opaque dots and is the accepted standard for screen reproduction. Its uniformity, wide latitude in exposure and development assure faithful reproductions with the utmost ease in handling.
- 2 HAMMER REGULAR OFFSET FILM. Clear Base or Non-Halation. This film, without the non-halation feature, is especially recommended for exposures through the back of the film for obtaining the reverse image without the use of a prism on the camera lens. HAMMER REGULAR OFFSET FILM NON-HALATION is ideal for contact negatives and positives.
- HAMMER SPECIAL ORTHO OFFSET FILM NON-HALATION is a color sensitive emulsion especially suited for use where color correction is necessary. Every quality of the other HAMMER emulsions is included in this fine medium plus the ortho color sensitivity.
- HAMMER SUPER PROCESS FILM—The fine dot etching which you obtain with HAMMER SUPER PROCESS is convincing evidence of its peerless value for indirect process methods. This medium is used successfully in photolithography and photogravure for line, continuous tone, and screen negatives and positives. This brand has about six times the speed of HALFTONE OFFSET. For rapid work without any sacrifice of quality, here is the medium to use.

(HAMMER SUPER PROCESS and HALFTONE OFFSET emulsions are also furnished on glass).

For free sample package of any of these mediums write to the HAMMER DRY PLATE & FILM CO., Ohio Ave. and Miami St., St. Louis, Mo.





TWO SINGLE PEDESTAL TYPE GRAVITY UNITS

You can depend upon the company that invented and pioneered the prevention of ink offset, smudging and sticking,—that makes, sells and services its own equipment,—that offers a complete line of "No-Offset" equipment built for every make of offset press.

ART STUDIO EQUIPMENT: Largest manufacturers of Artists' Airbrushes and Airequipment for the Designer, Portrait Artist, Illustrator, Retoucher and Engraver. Send for descriptive Art Bulletin L3-36.

"WHEN BUYING 'NO-OFFSET' PROCESS EQUIPMENT WE'LL SPECIFY PAASCHE AND ONLY PAASCHE"

-DOSIE & JOHNSON

• This statement from one of the Midwest's largest photolithographers is typical of the attitude of Paasche"No-Offset" Process users in the lithograph field. The reasons for this enthusiasm are clear to anyone who has seen the Paasche "No-Offset" Process under actual working conditions.

Ink offset and smudging are eliminated by the even treatment which each sheet receives, whatever the size of sheet or press speed, for the Patented air operated head with its simplified air and fluid controls assures uniform treatment all the way across each sheet.

Paasche "No-Offset" solutions are made under exclusive Paasche formulae—each developed to meet the ink offsetting problems of every kind of printing on:—offset, enamels, cardboard, cellophane, metallics, waxed papers, and other special surfaces.

A Patented Airconditioner insures maximum efficiency of the "No-Offset" solution by supplying dry air free of dust, rust, oil or other impurities, to the Paasche "No-Offset" heads.

Ask us to give you complete cost and operating details.



"NO-OFFSET" DIVISION

1909 DIVERSEY PARKWAY, CHICAGO, ILL.

The Craftsman Precision Copy Line-up and Negative Ruler

THIS is a new piece of equipment, just put on the market, which should be of great help to photo-lithographers.

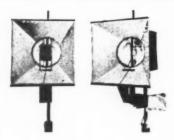
The Craftsman Precision Copy Line-up and Negative Ruler is a versatile piece of working equipment. Complicated cross-rule forms are simple ruling jobs on this machine, whether for pen ruling in ink or diamond-point ruling on negative direct. (Pen and diamond-point ruler are standard equipment.) An ingenious attachment permits a 50 per cent enlargement from copy for camera reduction. Other operations such as lay-outs, line-ups, registering, retouching, stripping, opaquing, masking, lining up multiples of negatives, registering of simple color jobs requiring duplication of subject, positioning of register-marks, etc., are done in a fraction of the time usually taken by a skilled employee.

The exclusive combination of the geared-operated ruling mechanism, illuminating compartment for registering, vertical copyboard equipped with an automatically operated scale positioned horizontally and moving vertically, double opal and plate glass surface, adjustable from level to angle position as desired, together with other labor-saving precision equipment, brings to the offset and lithographic plant a service that is practically indispensable for speeding up production, safeguarding and increasing estimated profits, and a higher standard of workmanship.

A triangular-shaped precision gear operated ruling-pen straight-edge moves vertically across the surface and always in perfect alignment. The ruling-pen straight-edge is equipped with a slidable combination pen-holder and carriage for movement along the straight-edge. The penholder is secured at correct ruling angle to the carriage and lowered to ruling position by spring-operated fingerrests. When released the pen-holder raises clear of paper for movement across sheet to next position. The pen or diamond-point ruler (both standard equipment) is rigidly held in pen-holder by slotted pin arrangement. Ruling-pen straight-edge may be locked in position to prevent accidental shifting. It is impossible to depress ink pen or diamond negative ruler below the paper or emulsion of negative. The ink pen has a fountain reservoir operated by a spring plunger. Heavy to hair-lines may be made by screw adjustment. Adjustable stops are placed on ruling pen straight-edge to limit the movement of pen carriage to desired length of line both horizontally and vertically. Vertical lines are ruled by lifting pen from carriage post and replacing at a quarter turn position. Lines are then drawn by moving ruling-pen straight-edge vertically.

This unique machine should prove of value to photolithographers, because of its versatility as an auxiliary machine when other and larger equipment is in constant use.

Literature, and pages, ruled on the table, may be had from the Craftsman Line-up Table Corporation, 49-59 River Street, Waltham, Mass.



NEW MACBETH ELECTIVE CLOSE-UP DIFFUSER

Use it or not, as you choose. The real answer to the question of diffusers.

If you want diffusers, push them up in place. If you want direct light, pull down with finger tips and diffusers disappear instantly.

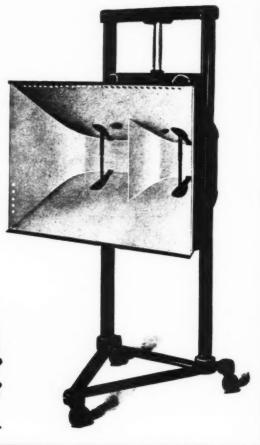
WORLD'S BEST PRINTING LAMP FOR LARGE FRAMES TYPE B-16

Specially designed reflector builds up light on edges and corners of frame. Result—you can load frame to capacity and still edges and corners of print will come up without over-printing center. Speed without fuzziness or halation.

Full twelve-inch trim. It is only necessary to trim each set of carbons once. Burn five hours without re-trimming.

Mounted on counterbalancing stand. Lamp readily moved up or down. Large ballbearing casters make it easy to move lamp in any direction.

There is a Macbeth lamp for every job in the Graphic Arts.



Macbeth World's Standard Photo Lamps

MACBETH ARC LAMP CO.

875 N. 28th St., Philadelphia, Pa.

OFFSET INKS LITHO

Lithographers throughout the country prefer Sinclair & Carroll inks for their color strength and good clean running properties on the press. These inks consistently prove their own merit and dependability by a faithful and clear cut reproduction of subject matter. In addition, many lithographers find sound value in the personal interest and cooperation always evident wherever Sinclair & Carroll inks are in use.

We will welcome the opportunities you afford us to formulate inks to your specific requirements.

SINCLAIR & CARROLL CO., Inc.

Makers of Printing, Litho and Litho Offset Inks

591-3-5 ELEVENTH AVE. Tel. BRyant 9-3566

NEW YORK CITY

CHICAGO: 440 West Superior Street Tel. Superior 3481
NEW ORLEANS, LA.: 518 Natches St. Tel. Main 4481

LOS ANGELES, CAL.: 417 E. Pico Street, Tel. Prospect 7296 SAN FRANCISCO, CAL. 345 Battery Street Tel. Garfield 3750

A

A Centralized Production Control System

(Continued from page 15)

PRESS	SHEET

PLATE NO. /		DATE 3/1
WORK	1000	
	JOB INFORMATION	
PAPER - KIND	20 w d 13 on 22/2 x 34 /2	INK Black
SPECIAL INSTR	UCTIONS	
FLAT MADE BY.	CONDITIO	N OF PLATE
LAY-OUT CHAD BY	CONDITIO	N OF PLATE
	CONDITIO	

Press Sheet Form

time in advance to the preparation of art, camera, and the layup departments, stating the day and hour when such work must be completed and delivered out of those departments.

With exceptions, which the control clerk has noted down—such as various kinds of punching, padding, banding, collating, etc.—he has a picture of whether the job has gone to the finishing department or if it is to be cut out and shipped at once.

The shipper reports four or more times a day by 'phone to the control clerk, simply giving list of job numbers shipped, which control clerk checks in his book, thus completing the transaction, and giving, we believe, a very workable plan for keeping close control of not only many small orders, but also the large ones.

Such a system, while somewhat difficult to describe, works very well in practice. It is in effect a man "in the pilot house at the wheel," who knows at all times just what is going on in all parts of the ship, and why. Consequently, all jobs can be accurately scheduled to meet their promised deliveries. All of which is but in effect the recognition of the expense of a control system as being far less than that resulting from the confusion of none.

Have You Tried...

CRYSTAL OFFSET

A beautiful, opaque grade, clean, smooth and flat. Surface sized and with just the right moisture content to prevent wrinkles and stretch. White and india in all sizes and weights. Also fancy finishes.

Large stocks on hand for immediate delivery; special orders made quickly. Samples and dummies cheerfully supplied.

LEARN TO TRY US FIRST

ROYAL PAPER CORP.

formerly ROYAL CARD & PAPER CO.

ELEVENTH AVENUE AND 25th STREET
NEW YORK



Our Envelope Manufacturing Department will supply quickly and economically any style of envelope from

any stock to go with mailing pieces. Samples and prices cheerfully submitted.

For Best Results

ECONOMY AND SIMPLE OPERATION

USE CONTRASTO



PROCESS FILMS

SHARPNESS AND DENSITY

NEGATIVE PAPERS

PURE WHITE AND CLARITY

STRIP FILMS

OUALITY OF WET PLATES

Write for Information to

POLYGRAPHIC CO. of AMERICA Inc.

Film Division 310 E. 45th St., New York, N. Y. 14 E. Jackson Blvd., Chicago, Ill.

WE ORIGINATE . . . OTHERS IMITATE

HEADQUARTERS

for

Strictly Pure and Always Uniform

BURNT LITHOGRAPHIC VARNISHES

BURNT PLATE OILS, DRYERS, Etc.

Also a Full Line of Special Varnishes For All Printing Purposes

White Metal Finishing Varnishes

for Printers and Decorators

of

SHEET METAL

C. W. H. CARTER

100 Varick Street

O. G. Carter, Sr., President ESTABLISHED 1865

New York, N. Y.

Chicago Sales Agent-Edward J. Lewis, 9 South Clinton St., Chicago, Ill.

PRESCRIPTION FOR SUCCESS

This prescription, written many years ago by the late Charles Francis, and based on his long and successful experience as a printer, is here reprinted because every word applies to the management of a photo-lithographic business.

R The principal ingredients that go to make up success in the printing business are as follows:

- Strict honesty with your customer, competitor, banker, those who assist you, meaning labor, and in fact in all things, especially with yourself.
- 2. A thorough knowledge of your business, both mechanically and commercially.
- 3. An efficient equipment and an efficient force to handle the equipment.
- 4. A knowledge of your costs sufficient at least to know whether you are making a fair profit on all your product.
- Careful study of your overhead to see that you do not overload your productive capacity by complicated book-keeping or methods of obtaining work.
- 6. Make your every customer a salesman for your business. This he is always willing to become if you treat him right and give him good service. It is easier to keep business than to get new business. Strain every effort in reason to please the customer.
- Have satisfied, competent help, and see that they are supplied with an abundance of material; it is cheaper than labor.
- 8. Be careful that every step or movement is shortened to the uttermost, and that the hygiene of the work-rooms is as good as it is possible to make it. Then if the returns show that it can be done, let the producers share with you the results. In fact, the whole establishment should be run on the family basis. "One for all and all for one."

With these I might add that constant watchfulness and thought with unity of action must bring success.

Plan To Attend

The Photo-Lithographic Convention

Cleveland, Ohio

October 14, 15, 16th

Made Especially for

Deep Etch Plates ECLIPSE Deep-Set Black

You will find this ink all you expect. Prints sharp and clean, and gives that intense contrast so necessary for the best results.

Eclipse deep-set Black is but one of the many offset inks we manufacture. If you also do letter-press printing you can depend on the uniformity and high quality of all our letterpress inks, blacks as well as colors.

Gaetjens, Berger & Wirth, Inc.

Gair Bldg., 35 York Street, Brooklyn, N. Y. 538 South Clark Street, Chicago, Illinois

Incorporated 1916

THE PIONEER PLATE GRAINERS IN AMERICA Reliability Backed by a Desire to Please

IMPORTANT ANNOUNCEMENT

TO MULTILITH OWNERS

We are pleased to announce to the trade that a new Department has been added to our already large graining plant to take care of your requirements in the Regraining of your MULTILITH PLATES.

ALL OUR PLATES ARE MARBLE GRAINED

WHEN WE SAY MARBLE GRAINED WE MEAN JUST THAT

They may cost a little more BUT what a DIFFERENCE. A trial order will convince you of their merits.

Address your inquirtes to

MULTILITH DEP'T, 45 ROSE ST., NEW YORK CITY
IF PLATE RELIABILITY IS WHAT YOU ARE LOOKING FOR - THAT'S US.

PHONES BEekman 3-4531-4542

Reliable Lithographic Plate Co., Inc.

17-27 Vanderwater St. & 45 Rose St., New York City

AFTER INTENSIVE EXPERIMENTS

Superior Announces

SUPERIOR LITHO OFFSET SILVER

ready for instant use. No caking, greasing or tinting – highly lustrous – and really economical because it goes further at half the cost of dusting.

"ALL THAT THE NAME IMPLIES"

SUPERIOR

PRINTING INK

PRINTING & LITHO INKS

295-309 LAFAYETTE STREET

COMPANY, INC.

METALLIC INKSEVARNISHES

NEW YORK . . . CANAL 6-330

BETTER REPRODUCTION PROOFS

A CRITICISM frequently leveled against photolithography by buyers of printed advertising is the inferior quality of the type reproductions. Too often this criticism is well justified. The fault, however, is not with the process, but the lack of care in making reproduction proofs, as well as not choosing the right type-face or type that is badly worn.

Photo-lithography now covers a broad field, and is produced in large plants and small all over the country. The large establishments have, of course, solved the problem. It still is a problem, however, to many smaller plants, as well as newcomers in this field. The following suggestions are not intended for the information of those who are aware of what is required, but they may be of help to others.

If possible, choose a type-face that does not have thin hair-lines and weak serifs. Instead, use type-faces such as Garamond, Bookman, Caslon in the larger sizes, Century Old Style or Century Expanded, Cushing, Deepdene, Kennerley, Italian Old Style, any of the sans serifs, or any

Of course, every letter should be perfect, and the type should be carefully scanned for bad letters before making the reproduction proofs.

of the heavy serif types such as Stymie, Girder, etc.

Too much care cannot be exercised in making the reproduction proofs. One concern that has had much experience with this work uses a Thompson press and makes proofs on a dull-coated paper, using a high-grade black ink, printing in full color, and with just a slight impression. With proofs like this, any photo-lithographer should have no difficulty in securing perfect negatives. And a perfect negative, in turn, means a satisfactory printing-plate. Then, if the man who operates the offset press knows his business—has every part of the press in perfect adjustment, reduces water to the minimum, as well as the amount of ink but runs in full color, and with just the right amount of impression—there is no reason why type matter reproduced by the photo-lithographic process should not be as clear and sharp as letterpress printing.

BOOKS

These are the masters who instruct us without whip or rod, without harsh words or anger, asking naught in return. If you seek them, they are not asleep, if you ask council of them, they do not refuse it; if you go astray, they do not chide; if you betray ignorance to them, they know not how to laugh in scorn. Truly, of all our masters, books alone are free and freely teach.—RICHARD DE BURY.

Be at war with your vices, at peace with your neighbors, and let every new year find you a better man.—Franklin.

It was good enough for my FATHER . . .



. . . so it's good enough for ME!

Ridiculous—out of the question—going too far? Perhaps. But just stop and think of certain people you know—of how unreasonably stubborn they are about some things—how foolish they seem when they won't even try something you know would help them, or their business.

There are some people like this—about rollers. They won't even consider any type of roller than the style they've been using for years. Not that there's anything wrong with sticking to a certain type roller when it's certain there's nothing better. But when an improved, vastly more efficient, but "different looking" roller is offered—a type of roller that has been proved to provide the finest distribution possible for offset work, save pressmen's time—will

he try it? No! Will he even consider it? NO! Why not? The answer is in the headline.



SAM'L BINGHAM'S SON MFG. CO.

ATLANTA CHICAGO CLEVELAND NASHVILLE DES MOINES DETROIT DALLAS NOUSTON INDIAMAPOLIS KALAMAZOO KANSAS CITY ST. LOUIS

MINNEAPOLIS PITTSBURGH SPRINGFIELD, O. OKLAHOMA CITY

Pacific Coast Representatives:

CALIFORNIA INK COMPANY, INC. SAM FRANCISCO, LOS ANGELES, PORTLAND, SEATTLE, SALT LAKE CITY

EVERY USER A BOOSTER!



Processed

EGG ALBUMEN
CONCENTRATE

for the

PHOTO-LITHOGRAPHER

EGGSACT

is a scientific product specially prepared for use as a sensitizer base in photolithography, on both zinc and aluminum plates.

The processing method employed removes all impurities and insoluble matter from the egg albumen and not only retains and preserves the film and adhesive properties, but actually improves them.

CONCENTRATE

"EGGSACT" specific gravity 1.094, Baume, 13.50, pH value 8.60.

SOLUBILITY

"EGGSACT" is completely soluble in water in any and all proportions, and produces a sparkling, clear sensitizer.

CONVENIENT

"EGGSACT" is very convenient and easy to handle, because is is always ready for use. No waiting for albumen to dissolve, no straining or filtering necessary.

STORAGE

"EGGSACT" requires no special storage because it remains constant indefinitely at normal room temperature.

Your plate maker has many problems.

Help him with an "EGGSACT" start.

"EGGSACT" is always uniform and free from variations, such as exist in dehydrated egg albumen.

SO CLEAR IT SPARKLES

ODORLESS

ASK YOUR SUPPLY HOUSE ABOUT IT

MANUFACTURED BY

7048 JONES AVE., N. W. SEATTLE, WASH.

in the West: THE CALIFORNIA INK CO; Inc.

SELLING LITHOGRAPHY

(Continued from page 17)

Or, take press equipment. When the salesman know the press sizes, the advantages and limitations of each press size, he is then in position to manipulate other elements which enter into the estimate to his own advantage. The chances of securing the business are greater.

No ideal set-up is found in any photo-offset plant that will relieve him of the task of juggling facts and figures and the elements discussed. For such a set-up to actually exist, every possible factor would have to be covered by the estimating department; and inasmuch these extend beyond the visible, beyond specifications the salesman brings in, and has root in the customers own premises and minds, so much research will be needed, so much figuring, so much speculation, so much time and cost, that the estimate—indicating a variety of "ifs," "ands" and "buts"— would reflect this and be too high.

The salesman, then, should plan to increase his knowledge day by day. He ought to work out a detailed schedule and adhere to it. An hour or two which will not conflict with his selling time should be seriously devoted to learning all about his own proposition.

Meanwhile, we assume he makes his daily rounds, and chiefly concerns himself with combination work. If his house turns out the best possible quality and will not permit salesmen to cut prices below the prevailing scale, the salesman may lose business to competitive houses who do not maintain a like policy. And here again he must evolve the proper application.

It may be that he will endeavor to build up a number of accounts on a quality basis, even though combination runs are the foundation. He suggests type composition, vignette and high-lighted halftones, surprints, etc. Then, instead of arguing about price, and having to meet the cuts on combination rates, he can entirely evade the issue.

By that I mean this: When asked about rates, he can answer: "You will find my house competitive, the work we do especially fine. What are you paying now?" He need not come back with a blunt counter-question, but can employ tactics whereby he secures this needed information without revealing his own combination prices.

Once he ascertains his prospect buys at cut rates, which he cannot meet, there is but one way to handle the situation. He can go on with something like this: "As I stated, we take cognizance of competition, but, frankly, we do not care to handle any slap-dash stuff. I should like an opportunity of making even the low-priced combination runs on 20-lb. bond stock more effective and resultful for you." He can show specimens of 20-lb. stock work wherein enter other factors: clean-cut type composition; high-lighted halftones; surprinting of delicate vignette halftone masses under typewritten text made through a carbon ribbon; in fact, many interesting effects produced by extra operations.

BOOST YOUR BUSINESS

(Continued from page 39)

low

ach

her ad-

er.

at

res

lly

by

nd

in

es

h

been said about reproductions made direct from typewritten copy, thus eliminating the expense of type-setting. To cover this phase thoroughly would require several pages.

Enough has been said, however, to enable any photolithographer to run every month a few hundred extra copies of some especially attractive job and then send it out to prospective customers accompanied by a brief statement pointing out the advantages of the photolithographic process for this kind of work.

This publication does not in any way depreciate the advantages of the letterpress, photogravure, or other methods of printing. We do feel, however, that the advantages of photo-lithography have not been sufficiently impressed upon the buyers of printing, and those concerns who are doing photo-lithographic work of high quality should continually advertise the advantages of the process.

AN INK QUERY

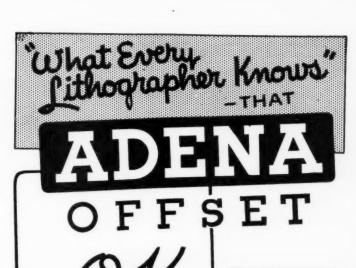
QUESTION: We have at times had to get a black plate from color copy and cannot obtain this separation in a usable condition without a great amount of hand work on the negative, due to the other colors registering on the negative in various densities. We would appreciate some information on a method to obtain the black plate without all this extra work.—St. Louis, Mo.

Answer: The usual method of making a black printing negative is to make an exposure through a K-2 filter. Plates made from this type of negative nearly always require considerable hand work before they are suitable for printing.

In order to eliminate this, recently an entirely new technique was developed, the black printing-plate exposure being made through a 88a filter on Type I-R infrared plate.

The use of this technique depends on the fact that nearly all the saturated, or "pure," colors reflect a high percentage of the infra-red. This is true, in general, of the majority of artificial colors, paints, color photographs, and natural scenes and objects. Certain pigments are exceptions. The iron-blues—Prussian, Chinese, Milori, and Berlin—and greens made from them, such as light, medium, and dark chrome green, and copper arsenite as Paris or emerald green, absorb infra-red strongly, photographing like black.

By omitting these colors from art-work, a correct black plate can be made in the infra-red.



It is O.K. because ready to run! Because of DUAL CONTROL, you can put ADENA on the press right from the case or skid.

Control is exercised all the way through—the moisture content while Adena is being made on paper machine...and additional control is made possible by a perfectly air-conditioned finishing room.

More! Control is maintained all through the entire process of sheeting, careful sorting, trimming and final inspection and packing.

100%
PERFECT
RESULTS
FOR
YOU



Save Money by Shipping via Miami Valley Shippers' Association.

NOTE!

Adena is
tub-sized...
lies flat...will not
wrinkle...has
no fuzz or
lint.

J. E. LINDE PAPER CO., EXCLUSIVE DISTRIBUTORS IN NEW YORK CITY

℡ CHILLICO THE PAPER 亞

MAKERS OF QUALITY OFFSET. LITHOGRAPH AND BOOK PAPERS

EXECUTIVE OFFICES

AND MILLS.

C H I L L I C O T H E , O .

Eastern Office: New York, H. Y., 41 Park Row Pacific Coast Office: Los Angeles, Calif., 943 N. Main St.

CHILLICOTHE-a buy-word for high grade papers

• HUNT

OFFERS A COMPLETE LINE OF CHEMICALS

for the LITHOGRAPHER

Listed below are twelve of our most widely used chemicals for the Lithographic Industry. Like all Hunt products they are carefully pre-tested and of such uniform quality that they always give the same results. Complete catalogue and price list on request.

Glycerine C.P.

Hydroquinone
Rubber Solution
Negative Collodion
Stripping Collodion
Gum Arabic Selected
Litho Developing Ink
Edible Hen Egg Albumen
Paraformaldehyde U. S. P.
Sodium Carbonate Photo Pure
National Photographic Carbons
Sodium Sulphite Anhydrous Photo



253-261 RUSSELL STREET BROOKLYN N. Y.

Why Lithographic Abstracts?

THE purpose of Lithographic Abstracts, which appear each month in this journal, is to give lithographers and those in related fields the opportunity to keep abreast of technical progress in the graphic arts throughout the world, without subscribing to a number of periodicals and reading a great many articles in various languages.

Material contained in Lithographic Abstracts is gleaned from a large number of sources, including nearly fifty periodicals issued in the United States and in four foreign countries. Each month between five hundred and a thousand articles, patents, reviews, and abstracts are scanned; two or three hundred are read; about a hundred abstracted; and from the latter the twenty-five most interesting from a technical point of view are chosen for publication in abstract form.

The articles selected describe advances in thought or practice, or give known technical material in useful form. Articles which deal with the historical, romantic, or artistic aspects of lithography, articles of advertising value only, articles presenting known facts in poorly organized form, and technical articles of an elementary nature are not included.

Each month a number of inquiries are received by the Department of Lithographic Research, requesting information on Lithographic Abstracts. Many ask for advice or assistance in obtaining copies of articles or patents abstracted, and some merely request the names and addresses of publishers of periodicals mentioned. With a view to increasing the usefulness of Lithographic Abstracts, the following information is offered to readers.

par

sen

to

of

AI

The abstracts are written so as to give, in as brief a form as possible, the important information contained in the original article, or at least to describe its contents. If he is interested, the reader can refer to the original article for details. A complete reference to the original article is given in each abstract, including the title, author, name of periodical in which it appeared, volume number, issue number, date, and page numbers. For each patent the title, author, government under which patented, patent number, and date of issue are given. For books the title, author, publisher's name and address, number of pages, and price are included.

Following are suggestions for obtaining copies of articles, patents, and books to which reference is made in Lithographic Abstracts:

Articles.—The name (in italics) and the date of the periodical in which the original article appeared are given in the abstract, following the title and author's name. Frequently articles can be consulted at public libraries. If the library does not subscribe to the periodical in question, it can nearly always give the

publisher's name and address, and back numbers of periodicals can usually be obtained at a nominal cost by writing to the publisher. If the publisher's supplies are exhausted, or the periodical was published abroad, or if for any other reason a photographic copy of the article is preferred, the latter can be obtained at cost from the Department of Lithographic Research, University of Cincinnati, Cincinnati, Ohio. The cost is twelve cents a page, plus postage, which amounts to approximately three cents for each four pages. The number of pages is indicated in the abstract, e. g., "pp. 459-62, 75" shows that the article in question covers pages 459 to 462, inclusive, and page 475, making five pages in all.

ers

ist

he

nd

d

t

When writing for information or for photo-copies of articles, the complete reference as found above the main body of the abstract should be given for purposes of identification.

Patents.—U. S. patents can be obtained by writing to "The Commissioner of Patents," Washington, D. C., giving the patent number, date of issue, patentee, and title, and enclosing ten cents in coin or money order for each patent. Stamps should not be sent. Photostats of foreign patents can be obtained through the photostat service of the Scientific Library of the U. S. Patent Office, Washington, D. C. The price varies with the length of the patent.

Books.—Books can be obtained from the publishers, whose name and address, along with the price of the book, are given in the abstract. Books can also be obtained by ordering through any reliable book dealer.

The Department of Lithographic Research has prepared the following mimeographed lists:

(I) "Periodicals Abstracted by the Department of Lithographic Research," giving names and addresses of publishers, and subscription prices.

(2) "Books of Interest to Lithographers," including names and addresses of publishers, and prices.

Either of these mimeographed lists may be obtained by sending six cents, or both by sending ten cents, in stamps, to the Department of Lithographic Research, University of Cincinnati, Cincinnati, Ohio.

Advertise In

THE PHOTO-LITHOGRAPHER

The Lithographed Medium

ZEISS

Optical Instruments
For Process Work



Lenses, Stops Prisms, Mirrors Magnifiers Color Filters

Revolving Collars Focusing Microscopes

Write for Information

CARL ZEISS, Inc. 485 Fifth Avenue, New York 728 South Hill St., Les Angeles

PHOTO-LITHOGRAPHER

You are invited to avail yourself of

OSTRANDER SERVICE

Spanning a period of 60 years devoted entirely to the interests of all branches of PRINTING PLATE MAKERS

CAMERA - LENSES - ARC LAMPS
SCREENS - WHIRLERS - PRINTING FRAMES

An unbiased discussion of Equipment might result in an installation of GREATER EFFCIENCY

THE OSTRANDER-SEYMOUR COMPANY

1870 S. 54th AVENUE
Cicero Station, CHICAGO, ILLINOIS
Eastern Office: CHRYSLER BUILDING, NEW YORK, N.Y.

"WHERE TO BUY IT"

This Handy Reference Page is a regular monthly feature of THE PHOTO-LITHOGRAPHER
It is an accurate guide to reliable firms

Listings are carried on this page at the rate of One Dollar Per Line per Month or Ten Dollars a Year Payable in Advance

ACCOUNTANTS

Kromberg & Associates, C. P. A.'s, J., 461 Eighth Ave., New York, N. Y.

Reinish, Samuel S., C. P. A., 2 Lafayette St., New York, N. Y.

ACIDS

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

Litho Chemical & Supply Co., 63 Park Row, New York, N. Y.

National Offset Supply Co., St. Louis, Mo.,

Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.

ADDRESSING AND MAILING SERVICES

Ardlee Service, Inc., 28 W. 23 St., New York, N. Y. Gray, James Letter Shop, 215 E. 45th St., New York, N. Y.

AGSCO GRAINING GRIT (ALUMINUS OXIDE)

American Graded Sand Co., 2516-18 Greenview Ave., Chicago, Ill.

AGSCO SILICA GRAINING SAND

American Graded Sand Co., 2516-18 Greenview Ave., Chicago, Ill.

AIR CONDITIONING EQUIPMENT

Offen, B. & Co., 608 S. Dearborn St., Chicago, Ill.

ALUMINUM PLATES

(See Plates)

ALBUMEN

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Holland, Thor, 7048 Jones Ave., N. W., Seattle, Wash.

Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio—1076 W. Division St., Chicago, Ill.

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

Litho Chemical & Supply Co., 63 Park Row, New York, N. Y.

National Offset Supply Co., St. Louis, Mo.

Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.

ALIGNING PAPER -

(See Vogeltype Paper)

ARC LAMPS

(See Lamps—Arc)

ASPHALTUM

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y. Hilo Varnish Corporation, 42-60 Stewart Ave.,

Lithe representation

tors

cern

taine

Ohio

beck

pp.

regu

pro

tive

acci

SION

F

the

Ag

tecl

His

Ma

the

duc

Pho

Son

I

Use

2,0

cole

chr

to

pla

adj

fro

said

mo

effe

gra

ing

(Fe

me pri

Brooklyn, N. Y.

International Printing Ink Corporation, 75 Variek St., New York, N. Y.

Litho Chemical & Supply Co., 63 Park Row, New York, N. Y.

National Offset Supply Co., St. Louis, Mo.

Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.

ARTISTS

Hugo L. Sachs, 7 West 20th St., New York, N. Y.

ARTISTS' SQUARES

Zoltan, John M., 833 Lyman Ave., Oak Park, Ill.

ARTISTS' SUPPLIES

Peerless Blue Print Co., The, 347 Fifth Ave., New York, N. Y.

BELLOWS

United Camera Co., Inc., 1515 Belmont Ave., Chicago, Ill.

BENDAY AND SHADING MEDIUMS

(See Shading Mediums)

BINDINGS

Plastic—Brewer—Cantelmo Co., Inc., 118 E. 27th St., New York, N. Y.

Spiral—Spiral Binding Company, 148 Lafayette St., New York, N. Y.

Wire-O—Trussel Mfg. Co., Poughkeepsie, N. Y. (See list of licensees in display advertisement)

BLANKETS

Bainbridge, Philip M. (Goodrich Rubber Blankets), 37 E. 28th St., New York, N. Y.

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Ideal Roller & Mfg. Co., 2512 W. 24th St., Chicago, Ill.

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

National Offset Supply Co., St. Louis, Mo. Rapid Roller Co., Federal at 26th, Chicago, Ill.

Reed Roller & Supply Co., Inc., 415-417 Jackson St., San Francisco, Cal.

Roberts & Porter, Inc., 100 Lafayette St., New York, N. Y., and 402 S. Market St., Chicago, Ill.

Lithographic Abstracts

Advance

rinting

Ave.,

Varick

New

City,

V. Y.

, Ill.

New

ve.,

7th

tte

s),

k

III.

. Y.

Abstracts of important current articles, patents, and books, compiled by the Research Department of the Lithographic Technical Foundation, Inc. These abstracts represent statements made by the authors of articles abstracted, and do not express the opinions of the abstractors or of the Research Department. Information concerning the books or periodicals abstracted may be obtained directly by addressing the Department of Lithographic Research, University of Cincinnati, Cincinnati, Ohio.

Photography and Color Correction

The Sterling-Groesbeck Diaphragm. H. A. Groes beck. American Photo-Engraver, 29, No. 3, Mar., 1937, pp. 202-5. The new Sterling-Groesbeck diaphragm is regulated by a micrometer screw to permit accurate decentering of the aperture in blocking out highlights, or to produce a double screen effect from coarse-screen negatives. The size of the diaphragm can be varied according to exposure desired, and the position can be adjusted accurately, by the use of a table, to fit any bellows extension, any screen, and any screen distance.

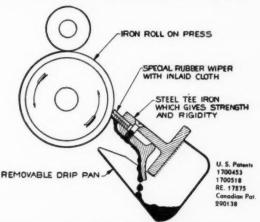
Photography. C. E. K. Mees. (Book). Published by the Macmillan Company, New York. 220 pp., \$3.50. A general review of the photographic field is given in non-technical language. The chapter headings are: The History of Photography, Manufacture of Photographic Materials, Modern Photographic Practice, Formation of the Photographic Image, Tone Values and their Reproduction by Photography, Motion-Picture Photography, Photography of Colored Objects, Color Photography, Some Applications of Photography.

Process for Reproducing Colors and Apparatus Used Therewith. F. J. Meinzinger. U. S. Patent No. 2,071,136 (Feb. 16, 1937). A process for reproducing colors by process engraving consisting of making a monochrome of a picture, making a sole color film of the picture to embody a plurality of said colors to be reproduced, placing said sole color film in a sole position of contact adjacent the front side of said monochrome to form the front of a complete picture assembly, and photographing said sole color film in its sole position of contact with said monochrome, said monochrome modifying the tonal effects of all of said plurality of colors during the photographing.

Photographic Image Bearer and Method of Making Same. E. E. Eckardt. U. S. Patent No. 2,071,821 (Feb. 23, 1937). A method of producing layers with metal images from light-sensitive metal halide layers comprising softening of exposed and developed layers to a

International Press Cleaners

are daily demonstrating their efficiency in Increasing Output and Lowering Production Costs



THIS IS OUR METHOD
OF REMOVING INK FROM PRESS

We invite you to take advantage of our thirty day trial offer. If interested write and let us know the size and make of your press.

INTERNATIONAL PRESS CLEANER & MFG. CO.
112 E. HAMILTON AVE. CLEVELAND, O.

ZINC AND ALUMINUM PLATES

Ungrained—Grained—Regrained

We also make a specialty of all the small plates as well as the Multilith

SERVICE PLUS QUALITY

Largest in the World

LITHOGRAPHI PLATE GRAINING CO. OF MERICA INC.

41-43 Box St.

BROOKLYN, N. Y.

Phones: Evergreen 9-4261

Sinclair & Carroll Co., Inc., 591 Eleventh Ave., New York, N. Y.

Sinclair & Valentine Co., 11 St. Clair Pl., New York, N. Y.

Vulcan Proofing Co., 58th St. and First Ave., Brooklyn, N. Y.

BRONZERS

Henschel Mfg. Co., Milwaukee, Wis.

CAMERAS

Agfa-Ansco Corp., Binghamton, N. Y.

California Ink Co., Inc., The, 545 Sansome St., San Francisco, Cal.

Croke, Allan A., Co., 163 Oliver St., Boston, Mass. Eastman Kodak Co., 343 State St., Rochester, N. Y.

Lanston Monotype Machine Co., 24th at Locust, Philadelphia, Pa.

Levy, Max & Co., Wayne & Berkley, Philadelphia, Pa.

Litho Equipment & Supply Co., Ogden Ave., Sheldon & Lake Sts., Chicago, Ill.

Miles Machinery Co., 18 East 16th St., New York, N. Y.

Norman-Willets Co., 318 W. Washington St., Chicago, Ill.

Ostrander-Seymour Co., The, 1870 S. 54th Ave., Cicero Station, Chicago, Ill.

Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.

Repro-Art Machinery Co., Wayne Ave. & Berkley St., Philadelphia, Pa.

Robertson, R. R., 1 N. Canal St., Chicago, Ill. Rutherford Machinery Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Sullebarger Co., E. T., 116 Nassau St., New York, N. Y., and 538 S. Clark St., Chicago, Ill. Wesel Mfg Co., 468 Fourth Ave. New York

Wesel Mfg. Co., 468 Fourth Ave., New York,N. Y., and Scranton, Pa.Zeiss, Carl, Inc., 485 Fifth Ave., New York, N. Y.

CARBON (ARC LAMP)

Pease Co., C. F., The, 809 N. Franklin St., Chicago, Ill.

CARBON PAPER RIBBONS

Remington Rand, Buffalo, N. Y.

CARBONS—Photographic

Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio—1076 W. Division St., Chicago, Ill.

CHEMICALS

Agfa-Ansco Corp., Binghamton, N. Y. California Ink Co., Inc., The, 545 Sansome St., San Francisco, Calif. Croke, Allan A., Co., 163 Oliver St., Boston, Mass. Eastman Kodak Company, Rochester, N. Y.

jelly

ima

izes

curv

betv

the

need

for

prin

гаса

36,

prep

the

Two

rect

the

fina

vign

C

No.

insta

filter

colo

alon

clud

of co

brief

So

Mod 1937

litho

by u

the r

scree

The

phot

Groe

out t

is to

Po

39, p

polar

and

A sir

elimi

polisi

the c

graph

APR

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio—1076 W. Division St., Chicago, Ill.

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

La Motte Chemicals Products Co., 438 Light St., Baltimore, Md.

Litho Chemical & Supply Co., 63 Park Row, New York, N. Y.

Mallinckrodt Chemical Works, 3600 N. Second St. Louis, Mo.

Merck & Co., Inc., Rahway, N. J.

National Offset Supply Co., St. Louis, Mo.

Norman-Willets Co., 318 W. Washington St., Chicago, Ill.

Phillips & Jacobs, 622 Race St., Philadelphia, Pa. Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill. Senefelder Company, Inc., The, 32-34 Greene St.,

New York, N. Y.

Siebold, Inc., J. H. & G. B., 47 Watts St., New York, N. Y.

CLOCKS—Interval Timers

Glogau & Co., 538 S. Clark St., Chicago, Ill.

COLOR CONTROL AND MEASURING EQUIPMENT

Huebner Laboratories, 202 E. 44th St., New York, N. Y.

COMPOSING MACHINES

Coxhead Corp., Ralph C., 17 Park Place, New York, N. Y.

COMPOSITION

Composing Room, The, 325 W. 37th St., New York, N. Y.

Grosby Press, Inc., 56 Gold St., New York, N. Y. Monsen, Thormod & Son, Inc., 730 N. Franklin St., Chicago, Ill. New York Monotype Composition Co., 461 Eighth

Ave., New York, N. Y.

CRAYONS-LITHO

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y. International Printing Ink Corporation, 75 Varick St., New York, N. Y.

Korn, Inc., Wm., 120 Center St., New York, N.Y. Roberts & Porter, Inc., 100 Lafayette St., New York, N. Y., and 402 S. Market St., Chicago, Il. jelly-like consistency and carrying the softening process on without dissolution of the emulsion until the metal image in the layer while still in gelatinous state skeletonizes by the metal particles cohering to form irregular or curved lines which contrast to a new bright background between the said lines, thus imparting to a photograph the character of an engraving or an etching and saving the need of a separate screen when the said layer is to be used for making therefrom printing surfaces for mechanically printed reproductions.

Masa

rinting

reland.

Varick

nt St.,

New

d St.

Chi-

, Pa.

City,

III.

St.,

New

JIP.

ork,

hth

Y. Brook.

Reducing Labor Costs by Masking. W. N. Misuraca. National Lithographer, 44, No. 3, Mar., 1937, pp. 36, 38. The applications of the masking method in the preparation of plates for tin printing are considered, with the exclusion of masking for the purpose of color correction. Two methods are described, one for the elimination or correction of backgrounds, and one, going a step further, for the insertion of new backgrounds or other matter in the final negative, the insertion of type matter, panels, and vignetting.

Color at New Speeds. I. L. Gartland. Printing, 61 No. 3, Mar., 1937, pp. 36-40. This article describes an instantaneous color camera having only one mirror and filter and using Dupac and Tripac films. A four-negative color separation can be produced by using the Tripac along with ordinary commercial film. Diagrams are included to show the camera construction. Reproduction of color work by the Chromatone color process is described briefly.

Some Minor Halftone Problems. M. Leeden Modern Lithographer and Offset Printer, 33, No. 2, Feb., 1937, pp. 21–2. The making of vignette halftone photolitho plates by the positive reversal or deep-etch processes by using a dry plate and locally staging the vignette, is the most satisfactory method, providing the exposure and screen distance are correct and the operator is skillful. The procedures for worked-up and for unworked-up photographs are explained. The use of the new Sterling-Groesbeck diaphragm in supplementary exposures to drop out the highlight dots or to produce a double screen effect is touched upon.

Pola Screens. E. W. H. Selwyn. Penrose Annual, 39, pp. 108-11 (and 2 pp. insert), (1937). The nature of polarized light is explained briefly, and the advantages and uses of Pola screens in photography are discussed. A single Pola screen may be used before the camera to eliminate or reduce reflections from glass, water, or polished surfaces. Two Pola screens are used, one before the camera and one before the light source, in photographing rough-surfaced prints, varnished oil paintings, and other irregular surfaces.

LITHOGRAPHERS TO THE TRADE ONLY

SINCE 1921

PHOTO OFFSET COLOR COMMERCIAL

LETTERHEADS, ETC. in combination on Whitings Mutual Bond

HINSON, McAULIFFE CORP.

205 EAST 12th STREET

NEW YORK, N.Y.

Tel.—GRamercy 7-0180

Sealed Jars when opened Tell the Tale . . .!

Will the printed job be odorless? Your answer will come thru a simple test of

HILO OVERPRINT "L"

A few screw top jars, some paper stock and a can of Hilo Overprint "L" with some other overprint for comparison.

Roll out some Hilo Overprint "L," put a coat on paper, the paper in a jar and seal; do the same with the other overprint. Open the jars ten days later and let your nose tell you how true our claim for Hilo Overprint "L".

HILO VARNISH CORPORATION



"73 Years Experience"
42-60 STEWART AVE., BROOKLYN, N.Y.
BRANCHES: CHICAGO • BOSTON

HILO	VARNISH	CORP.,	42	Stewart	Ave.,	Brooklyn,	N.	Y.
	sample Hi							

We need_____

irm ____

Name & Title

Address

APRIL 1937

CUT-OUTS

F. C. O. Company, 155 Sixth Ave., New York.

DAMPENING DEVICES

Goodrich, The B. F. Co., 570 S. Main St., Akron, Ohio.

International Press Cleaner & Mfg. Co., The, 112 E. Hamilton Ave., Cleveland, Ohio.

Meiners, Bernard, 49 Murray St., New York, N. Y. Wagner, Charles, Litho Machine Co., 51 Park Ave., Hoboken, N. J.

DEEP ETCH SUPPLIES

Parker Printing Preparations Co., 225 E. 44th St., New York, N. Y.

Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill. Robertson, R. R., 400 W. Madison St., Chicago, Ill.

DICHROMATE—Ammonium Photo Granular

Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio—1076 W. Division St., Chicago, Ill.

DIE CUTTING MACHINE-Semi-Automatic

Krause U. S. Corp., Karl, 55 Vandam Street, New York, N. Y.

DIES-DIE CUTTING

Fountain Die Cutters and Finishers, Inc., 155 Sixth Ave., New York, N. Y.

Freedman Die Cutting Co., B., 12 Duane St., New York, N. Y.

DIE CUTTING-MOUNTING

Consolidated Mounting & Finishing Co., 516 W. 34th St., New York, N. Y.

DIES-STEEL RULE

P. & J. Die Co., 419 Lafayette St., New York, N. Y.

DRIER-Paste and Liquid

Indiana Chemical & Mfg. Company, Indianapolis, New York City, Chicago.

DRYING OVENS

Lorenz, Louis, & Co., Inc., Rose and Duane Sts., New York, N. Y.

Zarkin Machine Co., Inc., 355 E. 27th St., New York, N. Y.

DRYERS

Carter, C. W. H., 100 Varick St., New York, N. Y. Hilo Varnish Corporation, 42-60 Stewart Ave., Brooklyn, N. Y.

Litho Chemical & Supply Co., 63 Park Row, New York, N. Y.

Sinclair & Valentine Co., 11 St. Clair Pl. New York, N. Y.

DYNAMOS—MOTORS—PRESS DRIVES AND ELECTRICAL CONTROL EQUIPMENT

American Type Founders Sales Corp., 200 Elmon Ave., Elizabeth, N. J.

Cutler-Hammer Mfg. Co., Inc., 315 N. 12th Ave., Milwaukee, Wis.

General Electric Co., Schenectady, N. Y.

Kimble Electric Co., W. 14th St. & S. Damen Ave., Chicago, Ill.

Northwestern Electric Co., 408 S. Hoyne, Chicago, Ill.

Robbins & Meyers, Inc., Springfield, Mo.

Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.

ENVELOPES

Dayton Envelope Co., Dayton, Ohio.

ETCHES

International Printing Ink Corporation, 75 Variek St., New York, N. Y.

Litho Chemical & Supply Co., 63 Park Row, New York, N. Y.

Parker Printing Preparations Co., 225 E. 44th St., New York, N. Y.

FADE-O-METER

Atlas Electric Devices Co., 361 W. Superior St., Chicago, Ill.

FILMS

Agfa Ansco Corp., Binghamton, N. Y.

California Ink Co., Inc., The, 545 Sansome St., San Francisco, Cal.

Croke, Allan A., Co., 163 Oliver St., Boston, Mass. Eastman Kodak Co., Rochester, N. Y.

Gevaert Co. of America, Inc., The, 423 W. 55th St., New York, N. Y.

Haloid Co., The, 6 Haloid St., Rochester, N. Y.

Hammer Dry Plate Co., Ohio Ave. & Miami St., St. Louis, Mo.

Norman-Willets Co., 318 W. Washington St., Chicago, Ill.

Polygraphic Co. of America, 310 E. 45th St., New York, N. Y.

FLANNEL

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Gevaert Co. of America, Inc., The, 423 W. 55th St., New York, N. Y.

International Printing Ink Corporation, 75 Variek St., New York, N. Y.

National Offset Supply Co., St. Louis, Mo. Roberts & Porter Inc. 100 Lafavette St. New Yo

Roberts & Porter, Inc., 100 Lafayette St., New York, N. Y., and 402 S. Market St., Chicago, Ill.

FOLDING MACHINERY

Baum, Russell Ernest, 615 Chestnut St., Phila., Ph.

Planographic Printing Surfaces and Plate Preparation

ND

Elmora

h Ave.

n Ave.,

hicago,

burgh,

arick

New

h St.

St.

San

ASS.

St.

St.,

St.,

lew

nk

t.,

ck

k,

Process for Producing Deep-etched Metal Plates, Particularly for Gravure. H. Wieneke. German Patent No. 634,690 (Aug. 13, 1936). Process for producing deep-etched metal plates particularly for gravure, characterized in that a grained or screened picture is transferred to a suitable metal surface, covered with etching lacquer, transfer washed out, and plate deep-etched.

What Is It? V. The Lithographic Engraver Also Can Create Planographic Image on Stone or Metal. A. H. Reiser. Printing Equipment Engineer, 53, No. 6, Mar., 1937, pp. 26, 57-8. The types of surface best adapted to crayon and tusche work of various types, the laying out of the work, and subsequent steps in the hand work and finishing are discussed.

Equipment and Materials

Rotary Multicolor Printing Machine. R. T. Colville. U. S. Patent No. 2,054,215 (Sept. 15, 1936). In a multi-color printing machine, a main frame, an impression cylinder rotatably mounted therein, an odd plurality of impression faces on said cylinder, an offset blanket on each said face, at least two offset cylinders operatively mounted in relation to the said impression cylinder, each said offset cylinder having an offset face and a space the arrangement being such that the offset face contacts with alternate impression faces, a plurality of plate cylinders mounted in operative contact with each offset cylinder, and means whereby an offset cylinder and associated plate cylinders may be circumferentially adjusted so that in each revolution each face of the impression cylinder which does not carry a sheet in that revolution receives an impression which is offset on to the inner face of a sheet when the outer face of said sheet receives an impression from another offset cylinder in the following revolution.

Apparatus for Cleaning Printing Press Rollers. B. F. Ford. U. S. Patent No. 2,054,618 (Sept. 15, 1936). An inking apparatus for presses, including a trough adapted to engage a roll of the press, said trough having a rubber wiper attached thereto, said wiper being composed of a divinyl acetylene derivative synthetic rubber.

Apparatus for Coating Lithographic Plates. R. Fritsche. U. S. Patent No. 2,074,171 (Mar. 16, 1937). In a machine for coating a plate with light sensitive material, a container of generally cylindrical form, the axis of said container extending in a horizontal plane, a plate supporting frame positioned in said container and mounted to rotate in a vertical plane, said container having one side formed with a centrally positioned opening, said container being adapted to receive a supply of water, means for rigidly clamping a plate on said frame, means for rotating said frame at a comparatively high speed, and means for rotating said container at a comparatively low speed.

VARI-TYPER



The Vew
Composing
Unit

Here is a complete unit ¶ as simple to operate as a typewriter ¶ which will provide the reading matter (printer's type styles) for bulletins, forms, charts, catalogues, house organs, etc. ¶ It is especially adapted to the requirements of good photo offset reproduction Carbon paper ribbon attachment ¶ hundreds of different styles and sizes of types ¶ instantly interchangeable ¶ Electrically controlled. providing absolute uniformity of impression Compact ¶ Complete ¶ It will save you the cost of typesetting!

RALPH C. COXHEAD CORP.

17 PARK PLACE

NEW YORK, N. Y.

For TRUE Color Separation, Use

I L F O R D PANCHROMATIC DRY PLATES

Special Rapid (Yellow Label); Soft Gradation (Pink

Label); Thin Emulsion Halftone (Green Label); Rapid Process (Blue Label).

For Halftone Dot Etching and Line, Use

HAMMER FILMS AND DRY PLATES

"Special-Ortho" Offset film or plates; Halftone Offset film or plates; Super Process film or plates; other photo-mechanical plates for all purposes.



ILFORD: U. S. Distributor - Agents HAMMER: Central States Agents

318 W. WASHINGTON ST.

CHICAGO

GLYCERINE

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio—1076 W. Division St., Chicago, Ill.

Litho Chemical & Supply Co., 63 Park Row, New York, N. Y.

Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.

GRAINING FLINT

New England Quartz Co. of New York, 150 Nassau St., New York, N. Y.

GRAINING AND REGRAINING—Zinc, Aluminum, Glass and Multilith Plates

Chicago Litho Plate Graining Co., 214-16 N. Clinton St., Chicago, Ill.

Croke Co., Allan B., 163 Oliver St., Boston, Mass. Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Illinois Litho Plate Graining Co., 913-921 W. Van Buren St., Chicago, Ill.

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

Lithographic Plate Graining Co., 41 Box St., Brooklyn, N. Y.

McKenna, James J., 1015 Callowhill St., Phila., Pa. Photo Litho Plate Graining Co., Inc., 1207 S. Highland St., Baltimore, Md.

Reliable Lithographic Plate Co., Inc., 17 Vandewater St., New York, N. Y.

Western Litho Plate & Supply Co., 1019 Soulard St., St. Louis, Mo.

GRAINING MACHINES

Fritsche, R., 145 Hudson St., New York, N. Y. Hoe, R., & Co., Inc., 910 E. 138th St., at East River, New York, N. Y.

Lorenz, Louis, & Co., Inc., Rose and Duane Sts., New York, N. Y.

McKinley Litho Supply Co., 1600 John St., Cincinnati, O.

Zarkin Machine Co., 335 E. 27th St., New York, N. Y.

GUM ARABIC

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio—1076 W. Division St., Chicago, Ill.

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

Litho Chemical & Supply Co., 63 Park Row, New York, N. Y.

National Offset Supply Co., St. Louis, Mo.

Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.

HAND ROLLERS

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

Roberts & Porter, Inc., 100 Lafayette St., New York, N. Y.

Siebold, Inc., J. H. & G. B., 47 Watts St., New York, N. Y.

HUMIDIFICATION

Advance Mfg. Co., Inc., Louisville, Ky.

Carrier Engineering Co., 850 Frelinghuysen Ave., Newark, N. J.

Lorenz & Co., Inc., Louis, Rose & Duane Sts., New York, N. Y.

Southworth Machine Co., 30 Warren Ave., Portland, Maine.

HYDROQUINONE

Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio—1076 W. Division St., Chicago, Ill.

INK COMPOUNDS

Indiana Chemical & Mfg. Company, Indianapolis, New York City, Chicago.

INKS

Acheson Ink Co., Inc., 142 Skillen St., Buffalo, N. Y. American Printing Ink Co., Div. General Printing Ink Corp., 2314 W. Kinzie St., Chicago, Ill.

Ault & Wiborg Co. of Canada, Ltd., 82 Peter St., Toronto, Ont., Canada.

August Corp., Charles, The, 416 Orleans St., Chicago, Ill.

Bowers Printing Ink Co., 711 W. Lake St., Chicago, Ill.

Braden-Sutphin Ink Co., 1736 E. 22nd St., Cleveland, Ohio

California Ink Co., 545 Sansome St., San Francisco, Calif.

Ceb Printing Ink Co., Chicago, Ill.

Crescent Ink & Color Co. of Penn., 464 N. 5th St., Phila., Pa.

Driscoll, Martin & Co., 610 Federal St., Chicago, Ill. Eagle Printing Ink Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Flint Ink Co., Howard, 2545 Scotten Ave., Detroit,

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Gaetjens, Berger & Wirth, Inc., 60 Columbia Heights, Brooklyn, N. Y., and 538 S. Clark St., Chicago, Ill.

General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Herrick Ink Co., Inc., Wm. C., 325 W. 34th St., New York, N. Y. Production of Copy Layouts. Universitatsdruckerei H. Stürtz A.-G. German Patent No. 636,373 (Sept. 17, 1936). Process for the production of copy layouts by means of lithographic drawings on ground glass plates, characterized in that the surface of the glass plate, ground preferably by sand blast, is covered before the drawing of the picture with a lacquer preferably insoluble in benzine, e. g. nitrocellulose lacquer, so thin that the grain is retained.

g Ink

arick

New

ork.

ve.,

Vew

ort-

ok-

nd.

lis,

Y.

ng

Paper and Ink

The Printability of Paper from a Papermaker's Point of View. J. Grant. Penrose Annual, 39, pp. 156-60 (and 1 p. insert), (1937). The author takes up the relationship between the printability of paper and its various other characteristics. The discussion includes sections on the relations between (1) beating and fiber condition; (2) moisture and troubles such as static, waviness, curling, poor register, and slow drying; (3) ink, paper qualities, and troubles such as transparency, show-through, and set-off; (4) paper color value and other paper characteristics; and (5) fluff and other paper characteristics. Proper beating is shown to have a definite bearing on register, opacity, quick drying, and absence of fluff. Photomicrographs illustrate the effect of beating on paper fibers.

Ink Mixing and Milling—Can They Be Improved? G. A. Vasel. American Ink Maker, 15, No. 3, Mar., 1937, pp. 25-6. The author discusses means of increasing the efficiency of the ink plant, and at the same time improving the product, by giving more attention to the following factors: the relative diameter and length of the rolls on the ink mill. the speed ratios of the rolls, the pressure on the rolls, the distribution of heat over the roll, and the breaking up of pigment aggregates by use of the mixer.

The Use of Wetting Agents in Printing Inks. J. L. Burton. American Ink Maker, 15, No. 3, Mar., 1937, pp. 21-3. The newer types of wetting agents now being tried out in the formulation of printing inks give promise of cutting ink costs by facilitating the dispersion of the pigments in the mixing and grinding operations, and bettering ink quality by improving flow and general working properties. The nature of these products and the theory of their action are discussed, and a simple procedure is outlined for testing the flow and dispersion characteristics of mixtures of pigment and vehicle.

"Inks Must Be Reduced to Fit Each Type of Paper." C. F. Geese. National Lithographer, 44, No. 3, Mar., 1937, pp. 44, 46. The terms used in describing the body of inks are defined, and instructions are given, for adapting soft inks to print hard-surfaced papers, heavy inks to print soft-surfaced papers, and requisite drier addition. In the use of papers with exceptionally soft,

OFFSET INKS

TIN PRINTING INKS DEVELOPING INK LITHO OPAQUE

Superior products designed for the finest work and developed in conjunction with leaders in the lithographic field.

THE CRESCENT INK & COLOR CO.

OF PENNSYLVANIA

464 N. FIFTH ST. PHILADELPHIA, PA.

P. & J.
COLLODIONS
FOR
Better Wet Plates

P. & J.
HYDROQUINONE
FOR
Better Dry Plates

P. & J.
EGG ALBUMEN
FOR
Better Coating of All Plates

A FULL LINE OF
QUALITY PHOTO-LITHOGRAPHIC CHEMICALS

WRITE FOR SAMPLES

PHILLIPS & JACOBS
622 RACE STREET PHILADELPHIA, PA.

Huber, Inc., J. M., 460 W. 34th St., New York, N. Y.
International Printing Ink Corp., 75 Varick St.,
New York, N. Y.

Johnson & Co., Inc., Charles Eneu, 10th & Lombard Sts., Phila., Pa.

Kohl & Madden Printing Co., 731 Plymouth Court, Chicago, Ill.

Levey Co., Inc., Frederick H., 59 Beekman St., New York, N. Y.

Mayer Co., Inc., Robert, 1107 Grand St., Hoboken, N. J.

Meiners, Bernard, 49 Murray St., New York, N. Y. Morrill Co., Geo. H., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

National Offset Supply Co., St. Louis, Mo.

Prescott Co., H. S., 470 Atlantic Ave., Boston, Mass. Reed Roller & Supply Co., Inc., 415 Jackson St., San Francisco, Cal.

Roberts, Inc., Lewis, 72 Union St., Newark, N. J. Roosen Co., H. D., Ft. 20th-21st St., Brooklyn, N. Y.

Schwarm & Jacobus Co., The, 1216 Jackson St., Cincinnati, Ohio

Siebold, Inc., J. H. & G. B., 47 Watts St., New York, N. Y.

Sinclair & Carroll Co., Inc., 591 11th Ave., New York, N. Y.

Sinclair & Valentine Co., Inc., 11-21 St. Clair Pl., New York, N. Y.

Sleight Metallic Ink Companies, Inc., 538 N. Third St., Phila., Pa.

Stevens Co., Inc., Frank H., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Superior Printing Ink Co., Inc., 295 Lafayette St., New York, N. Y.

Triangle Ink & Color Co., Inc., 26 Front St., Brooklyn, N. Y.

Ullman Co., Sigmund, Div. General Printing Ink Corp., Park Ave. & E. 146th St., New York, N. Y.

Williams Co., Inc., R. S., 257 W. 17th St., New York, N. Y.

Winslow Ink Corp., 124-132 White St., New York, N. Y.

INKS—METALLIC (Gold and Offset Silver)

Superior Printing Ink Co., Inc., 295 Lafayette St., New York, N. Y.

INK WAX REDUCER (Smoothol Ink Wax)

Smith Co., Francis X., 952 E. 93rd St., Brooklyn, N. Y.

INSURANCE-Workmen's Compensation

N. Y. Printers & Bookbinders Mutual Insurance Co., 147 Fourth Ave., New York, N. Y.

LAMPS, ARC

Atlas Electric Devices Co., Inc., 361 W. Superior St., Chicago, Ill. Gelb Co., Joseph, 250 W. 54th St., New York, N. Y. Macbeth Arc Lamp Co., 875 N. 28th St., Phila., Pa. Ostrander-Seymour Co., The, 1870 S. 54th Ave., Cicero Station, Chicago, Ill.

Pease Co., C. F., The, 809 N. Franklin St., Chicago,

Sullebarger Co., E. T., 116 John St., New York, N. Y., and 538 S. Clark St., Chicago, Ill.

LENSES

Bausch & Lomb Optical Co., 140 Smith St., Rochester, N. Y.

Glogau & Co., 1660 Rand McNally Bldg., Chicago, Ill.

Goerz American Optical Co., C. P., 317 E. 34th St., New York, N. Y.

Ostrander-Seymour Co., The, 1870 S. 54th Ave., Cicero Station, Chicago, Ill.

Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill. Zeiss, Carl, Inc., 485 Fifth Ave., New York, N. Y.

LINE-UP AND REGISTER MACHINES, SYSTEMS AND TABLES

Craftsmen Line-Up Table Corp., 49 River St., Waltham, Mass.

Hamilton Mfg. Co., Inc., 1315 18th St., Two Rivers, Wis.

Lanston Monotype Machine Co., 24th at Locust, Phila., Pa.

Miles Machinery Co., 18 E. 16th St., New York, N. Y.

Robertson, R. R., 400 W. Madison St., Chicago, Ill.

Wesel Mfg. Co., 468 Fourth Ave., New York, N. Y., & Scranton. Pa.

F s d a h

p

T

ti

R

ti A

LITHO DEVELOPING INK

Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio—1076 W. Division St., Chicago, Ill.

LITHO ENGRAVING AND DRAWINGS

Litho Trade Service Studio, 538 S. Clark St., Chicago, Ill.

LITHOGRAPHIC EQUIPMENT DISTRIBUTORS

Heuslein, R. J., Co., 11 S. Meridian St., Indianapolis, Ind.

MACHINISTS

Gegenheimer, Inc., Wm., 78 Roebling St., Brooklyn, N. Y.

Lorenz, Louis, & Co., Inc., Rose and Duane Sts., New York, N. Y.

Rathbun & Bird Co., Inc., 85 Grand St., New York, N. Y. fuzzy surfaces, or papers otherwise not suitable for offset, work, tricks must be resorted to, such as adding a small amount of kerosene to the ink. The author recommends a formula for preparing the ink for printing on offset enamel papers. So-called reducers, such as kerosene (permissible only when using fuzzy papers), magnesia, cornstarch, and machine oil are detrimental to good ink and to good printing.

Y.

Pa.

go,

rk,

es-

50,

y,

S

Reactions Between Vehicles and Pigments in Ready Mixed Paints. W. H. Droste. Verfkroniek, 9, June, 1936, pp. 156-60. The chemical and physical interactions of pigments with vehicles such as linseed oil are discussed, in relation to the effects of these reactions on the characteristics of the films obtained. The chemical changes include metal-soap formation from basic pigments combining with the free fatty acids produced by oxidation of the higher acids in linseed oil, and the action of these metal soaps on aging. A physical phenomenon, of greater importance than the chemical changes, is the wetting of the surface of the pigment particles by the vehicle. The author discusses the factors affecting wetting and touches upon the manner in which the surface phenomena may be used to explain the wetting and adhesion properties, the settling of pigments, the properties of "length" and "shortness," the water resistance of pastes, and the flow behavior of varnishes.

Pigments. F. W. Johnson. U. S. Patent No. 2,046,267 (June 30, 1936). The process of producing finely divided, amorphous, regenerated cellulose pigments which comprises heating an alkaline aqueous solution of an alkali salt of a cellulose monoester of a dicarboxylic acid and a dye for cellulose of the type which can be applied from alkaline solution to a temperature sufficiently high to hydrolyze said mono-ester, whereby cellulosic particles containing the dye are precipitated in finely divided, practically colloidal, but filterable form.

General

Photo-Gelatin Printing. I. and II. F. Pfund (Translated by J. D. Carliph-Ebert, from Der Deutsche Buch- und Stein-Drucker). Lithographers' Journal, 21, No. 10, Jan., 1937, pp. 386, 400; No. 11, Feb., 1937, pp. 430, 444. The first installment of this comprehensive series of articles on photo-gelatin or "collotype" printing deals with the history and development of the process. The second installment, after dealing with the theory of photo-gelatin printing, discusses the practical considerations of equipment and photographic manipulations. Retouching and mounting of the negative are to be continued in a later installment.

"SULLEBARGER"

CAMERAS
SCREENS
LENSES
ARC LAMPS
VACUUM FRAMES
WHIRLERS
CARBONS
OKAY OPAQUE
OKAY DEVELOPING INK

E. T. SULLEBARGER CO

116 JOHN STREET NEW YORK, N. Y. 538 SOUTH CLARK ST

CHICAGO, ILL.

THE RATHBUN & BIRD COMPANY, Inc.

MACHINISTS

FOR

Lithographers
Photo-Engravers
Electrotypers
Printers

PLANTS MOVED

MACHINES RE-CONDITIONED

REPAIR SERVICE

Since 1898

85 GRAND STREET NEW YORK, N. Y. Tel.: CAnal 6-4145-4146

MAGNIFYING AND REDUCING GLASSES

Bausch & Lomb Optical Co., 635 St. Paul St., Rochester, N. Y.

Glogau & Co., 1660 Rand McNally Bldg., Chicago,

Norman-Willets Co., 318 W. Washington St., Chicago, Ill.

Repro-Art Machinery Co., Wayne Ave. & Berkeley St., Phila., Pa.

Zeiss, Inc., Carl, 485 Fifth Ave., New York, N. Y.

MAKE-UP TABLES

Lanston Monotype Machine Co., 24th at Locust, Phila., Pa.

Miles Machinery Co., 18 E. 16th St., New York,

Robertson, R. R., 400 W. Madison St., Chicago, Ill. Wesel Mfg. Co., 468 Fourth Ave., New York, N. Y., and Scranton, Pa.

MOLESKIN AND MOLLETON

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

McKinley Litho Supply Co., 1600 John St., Cincinnati, Ohio

Roberts & Porter, Inc., 100 Lafayette St., New York, N. Y., and 402 S. Market St., Chicago, Ill.

Siebold, Inc., J. H. & G. B., 47 Watts St., New York, N. Y.

MOTORS AND CONTROLLERS

Cline Electric Mfg. Co., 211 W. Wacker Drive, Chicago, Ill.

MOUNTING AND DIE-CUTTING

Freedman, Wm. A., 657 Sixth Ave., New York, N. Y.

MOUNTING AND FINISHING

Lincoln Mounting & Finishing Co., Inc., 445 W. 31st St., New York, N. Y.

NEGATIVE MATERIALS

Agfa Ansco Corp., Binghamton, N. Y.

Cramer Dry Plate Co., G., Lemp & Shenandoah Ave., St. Louis, Mo.

Eastman Kodak Company, Rochester, N. Y.

Gevaert Co. of America, Inc., The, 423 W. 55th St., New York, N. Y.

Haloid Co., The, 6 Haloid St., Rochester, N. Y.

Hammer Dry Plate Co., Ohio Ave. & Miami St., St. Louis, Mo.

Norman-Willets Co., 318 W. Washington St., Chicago, Ill.

Polygraphic Company of America, Inc., 310 E. 45th St., New York, N. Y.

NO-OFFSET EQUIPMENT

Specialties Div., General Printing Ink Corp., 100 Sixth Ave., New York, and 608 S. Dearborn St., Chicago, Ill.

Ph

Penro

for th

cusse

argir

trans

velop

a lar

form

appr more

T

Lithe

Rep

Nov

tran

the 1

met

of t

cert

P

E. V

Pro

han

reto

ton

cor

neg

on

An

ph

bet

che

clo

car

are

CO

pri

us

ne

po

pr

uŗ

it

ri h A

OFFSET PLATE ENGRAVINGS

Chicago Litho Plate Graining Co., 214 N. Clinton St., Chicago, Ill.

Minotti, Inc., M. A., 127 Lafayette St., New York. N. Y.

OFFSET PLATE MAKING SERVICE

(See Plate Making Service)

OPAQUE AND DEVELOPING INK

Acheson Ink Co., Inc., Skillen St., Buffalo, N. Y. Okie, Francis G., 247 S. Third St., Phila., Pa.

PAPER

Aetna Paper Co., The, Dayton, Ohio American Writing Paper Co., Holyoke, Mass. Beckett Paper Co., The, Hamilton, Ohio

Brown Company, Portland, Maine

Burgess Cellulose Co. (Div. of C. F. Burgess Laboratories, Freeport, Ill.)

Cantine Co., Martin, Saugerties, N. Y. Case & Risley Press Paper Co., Oneco, Conn.

Champion Paper & Fibre Co., Hamilton, Ohio Chemical Paper Mfg. Co., Holyoke, Mass.

Chillicothe Paper Co., The, Chillicothe, Ohio Consolidated Water Power & Paper Co., Wisconsia

Rapids, Wis. Crocker-McElwain Co., Holyoke, Mass.

Dill & Collins, Inc., Richmond & Tioga Sts., Philadelphia, Pa.

Eastern Mfg. Co., 500 Fifth Ave., New York, N. Y. Falulah Paper Co., Fitchburg, Mass.

Fraser Industries, Inc., 424 Madison Ave., New York, N. Y.

Hamilton, W. C. & Sons, Inc., Miquon, Pa.

Hammermill Paper Co., Erie, Pa.

Hollingsworth & Whitney Co., 140 Federal St., Boston, Mass.

Howard Paper Co., Urbana, Ohio

International Paper Co., 220 E. 42nd St., New York City, N. Y.

Kimberly-Clark Corp., Neenah, Wis.

Maxwell Paper Co., Franklin, Warren County, Ohio

Munising Paper Co., Munising, Mich. Neenah Paper Co., Neenah, Wis.

Rhinelander Paper Co., Rhinelander, Wis.

Riegel Paper Co., 342 Madison Ave., New York, City, N. Y.

Strathmore Paper Co., W. Springfield, Mass.

Warren, S. D. Co., 89 Broad St., Boston, Mass. Watervliet Paper Co., Watervliet, Mich.

West Virginia Pulp & Paper Co., 230 Park Ave.,

New York City, N. Y.

Whiting Geo. A. Paper Co., Menasha, Wis.

Photo-Lithography for Posters. F. J. Tritton. Penrose Annual, 39, pp. 125-8 (1937). The opportunities for the use of photo-lithography in poster making are discussed, and the problems involved, such as choice of enlarging method and of color reproduction method, size of transparency, type of illumination, and method of developing are taken up. As the whole of the drawing and a large proportion of the color separation work are performed by automatic means, there appears to be an appreciable economy, and complicated subjects cost little more than simpler ones.

P., 100

orn St.

Clinton

York.

Y.

gess

sig

la-

The Details of Type Reproduction. M. Leeden-Lithographers' Journal, 21, No. 11, Feb., 1937, p. 428. Reprinted from Modern Lithographer and Offset Printer, Nov., 1936.) The author gives a brief description of the transfer process, the use of transparent paper or viscose, the use of a camera negative, the reflex processes, and the methods of photographing direct from type. Production of the best results in each process requires attention to certain fine points, which are discussed.

Miscellaneous

Process for the Production of Printing Forms. E. Warnecke. German Patent No. 598,429 (July 16, 1936). Process for the production of printing forms having enhanced color values for multicolor printing, in which the retouching is carried out on positives prepared from halftone separation negatives, characterized in that the uncorrected halftone copy prepared from the separation negatives is produced on a light-sensitive coating carried on a white substratum which has a non-extensible support.

Color Photogravure. H. M. Cartwright. Penrose Annual, 39, pp. 135-9 (1937). Control methods in color photogravure are discussed. There is a simple relation between time and depth of etching, so that under properly chosen conditions the densities of tones in the proof are closely proportional to the etching time. Printing values can therefore be controlled when densities in the positive are measured and the proper etching time given to the copper, or, more conveniently, an "etching scale" can be printed on the carbon tissue along with the positives and used in control of etching time. The standardization of negatives, color correction by retouching negatives and positives, the carbon printing technique, the choice of printing inks, and the quality of negatives are also taken up briefly.

When one comes up to the mark he has set for himself, it is a safe conclusion that the standard was too low.

Roger Babson enumerates seventy ways to become rich, but unfortunately every one requires hard work and hard thinking.

APRIL 1937

GOERZ

LENSES

for Photolithography



When buying new camera equipment . .

be sure you specify Goerz Lenses. The high quality of these American-made products is acknowledged by its discriminating users in the photo engraving and photolithographic fields.

CONVINCE YOURSELF WITHOUT COST

All camera manufacturers and supply dealers will gladly arrange with us to allow you a free trial.

Prompt deliveries from stock. Expert service and repairs when needed.

Literature on request.

CPGOERZ AMERICAN OPTICAL CO.

ZINC AND______ALUMINUM PLATES

grained correctly to suit any offset job.

MULTILITH PLATES

Regrained to suit your requirements.

We are manufacturers of METALSHEETS for ROTAPRINT Machines.

Modern Graining Machinery and Expert Workmen.

Try our plates on one job and be convinced.

THE PHOTO-LITHO PLATE GRAINING CO.

1207-15 S. Highland Ave. BALTIMORE, MD

PAPER CONDITIONING EQUIPMENT

Advance Mfg. Co., Inc., Louisville, Ky.

Lorenz & Co., Inc., Louis, Rose & Duane Sts., New York, N. Y.

Southworth Machine Co., 30 Warren Ave., Portland, Maine

PAPER DISTRIBUTORS

Bulkley-Dunton & Co., 295 Madison Ave., New York City, N. Y.

Forest Paper Co., Inc., 334 Hudson St., New York, N. Y.

Lathrop Paper Co., 155 Perry St., New York, N. Y. Linde Paper Co., J. E., 84 Beekman St., New York, N. Y.

Marquardt & Co., Inc., 153 Spring St., New York, N. Y.

Millar & Co., Inc., Geo., W., 284-290 Lafayette St., New York, N. Y.

Miller & Wright Paper Co., 200 Varick St., New York, N. Y.

Royal Paper Corp., 11th Ave. & 25th St., New York, N. Y.

PARAFORMALDEHYDE-U. S. P.

Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio—1076 W. Division St., Chicago, Ill.

PHOTO COMPOSING MACHINES

Lanston Monotype Machine Co., 24th at Locust, Phila., Pa.

Rutherford Machinery Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

PHOTO LETTERING MACHINES

Rutherford Machinery Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Wesel Mfg. Co., 468 Fourth Ave., New York, N. Y., and Scranton, Pa.

PLATE COATING EQUIPMENT

Lanston Monotype Machine Co., 24th at Locust,

Zarkin Machine Co., 335 E. 27th St., New York, N. Y.

PLATE CRAINING MACHINES

Robertson, R. R., 400 W. Madison St., Chicago, Ill. Wesel F. Mfg. Co., Inc., 468 Fourth Ave., New York, N. Y., and Scranton, Pa.

Zarkin Machine Co., Inc., 355 E. 27th St., New York, N. Y.

PLATE GRAINING MATERIALS

American Graded Sand Co., 2516-18 Greenview Ave., Chicago, Ill.

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

New England Quartz Company of New York, 150 Nassau St., New York, N. Y. Seibold, Inc., J. H. and G. B., 47 Watts St., New York, N. Y.

Zarkin Machine Co., Inc., 355 E. 27th St., New York, N. Y.

PLATE MAKING EQUIPMENT

California Ink Co., Inc., The, 545 Sansome St., San Francisco, Cal.

Lanston Monotype Machine Co., 24th at Locust St., Phila., Pa.

Lorenz, Louis, & Co., Inc., Rose and Duane Sts., New York, N. Y.

Miles Machinery Co., 18 E. 16th St., New York, N. Y.

Rutherford Machinery Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Wesel Mfg. Co., 468 Fourth Ave., New York, N. Y., and Scranton, Pa.

PLATE MAKING SERVICE

Columbia Offset & Reproduction Corp., 2 Duane St., New York, N. Y.

Minotti, Inc., M. A., 129 Lafayette St., New York, N. Y.

Monsen, Thormod & Son, Inc., 730 N. Franklin St., Chicago, Ill.

Offset Engravers Associates, Inc., 42 E. 20th St., New York, N. Y.

Offset Printing Plate Co. of New York, Inc., 100 Bleecker St., New York, N. Y.

Rightmire-Berg Co., 717 S. Wells St., Chicago, Ill. Stockinger & Langbein Photo Litho Corp., 30 E. 21st St., New York, N. Y.

Swart-Reichel, Inc., 461 Eighth Ave., New York, N. Y.

Stevenson Photo Color Separation Co., 222 W. Fourth St., Cincinnati, Ohio

PLATES-ALUMÍNUM, ZINC

Aluminum Co. of America, Gulf Bldg., Pittsburg, Pa.

American Zinc Products Co., Greencastle, Ind. Croke, Allan A., 163 Oliver St., Boston, Mass.

Edes Mfg. Co., The, Plymouth, Mass.

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

Lithographic Plate Graining Co., 41 Box St., Brooklyn, N. Y.

Matthiessen & Hegeler Zinc Co., Ninth St., LaSalle,

National Litho Plate Co., The, 35 Meadow St., Brooklyn, N. Y.

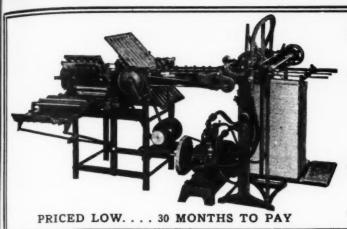
National Offset Supply Co., St. Louis, Mo.

Photo-Litho Plate Graining Co., Inc., 1207 S. Highland St., Baltimore, Md.

Reed Roller & Supply Co., Inc., 415-417 Jackson St., San Francisco, Cal.

Reliable Lithographic Plate Co., Inc., 17 Vandewater St., New York, N. Y.

APR



OFFSET PRINTERS EVERYWHERE are installing

THE NEW

OUINTUPLET" AIR-FEED FOLDER

5 FOLDS IN ONE OPERATION 15,000 OPERATIONS AN HOUR

Accuracy Unexcelled --- 60 Styles of Folds

RUSSELL ERNEST BAUM

615 CHESTNUT ST.

PHILADELPHIA, PA.

Columbia Offset & Reproduction Corp.

- Artists to the trade
- Negatives, Positives and Process Work for Machine or Hand Transfer
- Originals on Stone & Plate

WE OPERATE NO PRESSES

NO CONNECTION WITH ANY LITHOGRAPHIC PLANT

2 DUANE STREET, NEW YORK, N. Y.

Telephone: BEekman 3-2436

Speaking of Quality in Literature . . .

The magnificent quality of work turned out by leading lithographers is due to no monopoly of technique, no corner of the market on talent.

Indeed more often than not the intangible something that sets the quality job above the ordinary job is due to the grain on the

We know by long years of experience how to properly grain and regrain your zinc, aluminum and glass. We guarantee every plate which leaves our plant.

All sizes in stock for immediate delivery. We specialize in regraining multilith plates.

WESTERN LITHO PLATE & SUPPLY CO. 1019 SOULARD STREET

ST. LOUIS, MISSOURI

ILLINOIS LITHO PLATE GRAINING CO.

913-921 WEST VAN BUREN ST.

CHICAGO, ILLINOIS

Over Thirty Years

We have been supplying some of the largest and most reliable lithographing firms in the States with Plate Graining Materials

Wausau Quartz Graining Sand Agsco Graining Grit (Aluminum Oxide) Agsco Silica Graining Sand Steel Graining Balls

Glass Graining Marbles TBS Agsco Plate Cleaner Silicon Carbide Grain Scotch Tape

FREE SAMPLE

May we send you a generous sample. Let us match up the abrasive you now employ.



New

New

San

t St.

Sts.,

ork,

ting

Y.,

St.,

ork,

St.,

St.,

100

E.

ork,

W.

rg,

nk

ick

k-

le,

t.,

h-

n

0-

R

Graded Sand Company

2516-18 Greenview Avenue

Chicago, Illinois

PLATES-DRY

Eastman Kodak Company, Rochester, N. Y.

Gevaert Co. of America, Inc., The, 423 W. 55th St., New York, N. Y.

Hammer Dry Plate Co., Ohio Ave. & Miami St., St. Louis, Mo.

Norman-Willets Co., 318 W. Washington St., Chicago, Ill.

Polygraphic Company of America, Inc., 310 E. 45th St., New York, N. Y.

PLATES-ZINC, COPPER and ALLOY

(for Engravers)

Rolled Plate Metal Co., 210 Van Brunt St., Brooklyn, N. Y.

PRESSES-New

American Rotaprint Corp., 1909 Euclid Ave., Cleveland, Ohio

Griffiths Co., Inc., John, 145 Nassau St., New York, N. Y.

Harris-Seybold-Potter Co., 4510 E. 71st St., Cleveland, Ohio

Hoe, R., & Co., Inc., 910 E. 138th St., at East River, New York, N. Y.

Miehle Printing Press & Mfg. Co., 14th St., and S. Damen Ave., Chicago, Ill.

New Era Mfg. Co., 145 Nassau St., New York, N. Y. Rutherford Machinery Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Webendorfer-Wills Co., Inc., Mount Vernon, N. Y. Willard Press Mfg. Co., 28 W. 23rd St., New York, N. Y.

PRESSES-Rebuilt Litho

Lorenz, Louis, & Co., Inc., Rose and Duane Sts., New York, N. Y.

Miles Machinery Co., 18 E. 16th St., New York, N. Y.

Zarkin Machine Co., Inc., 355 E. 27th St., New York, N. Y.

PRESS ROOM SPECIALTIES

Indiana Chemical & Mfg. Company, Indianapolis, New York City, Chicago

PROOF AND TEST PRESSES

Griffiths, John Co., Inc., 145 Nassau St., New York, N. Y.

Lanston Monotype Machine Co., 24th at Locust, Phila., Pa.

QUARTZ GRAINING SAND

American Graded Sand Co., 2516-18 Greenview Ave., Chicago, Ill.

New England Quartz Co. of New York, 150 Nassau St., New York, N. Y.

REBUILT EQUIPMENT

Lorenz, Louis, & Co., Inc., Rose and Duane Sta, New York, N. Y.

Miles Machinery Co., 18 E. 16th St., New York, N. Y.

Zarkin Machine Co., Inc., 355 E. 27th St., New York, N. Y.

ROLLERS

American Type Founders Sales Corp., 200 Elmora Ave., Elizabeth, N. J.

Bingham Bros. Co., Inc., 406 Pearl St., New York, N. Y.

Bingham's Son Mfg. Co., Sam'l, Chicago, Ill.

Dayco Division, Dayton Rubber Mfg. Co., Dayton, Ohio

General Tire & Rubber Co., Akron, Ohio

Ideal Roller & Mfg. Co., Inc., 2512 W. 24th St., Chicago, Ill., and 21-24 Thirty-ninth Ave., Long Island City, N. Y.

National Offset Supply Co., St. Louis, Mo.

Niles & Nelson, Inc., 75 West St., New York, N. Y. Rapid Roller Co., Federal at 26th, Chicago, Ill.

Roberts & Porter, Inc., 100 Lafayette St., New York, N. Y., and 402 S. Market St., Chicago, Ill. Siebold, Inc., J. H. & G. B., 47 Watts St., New York, N. Y.

Vulcan Proofing Co., 58th St. & First Ave., Brooklyn, N. Y.

SCREENS-Halftone

Miles Machinery Co., 18 E. 16th St., New York, N. Y.

Ostrander-Seymour Co., The, 1870 S. 54th Ave., Cicero Station, Chicago, Ill.

Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.

Repro-Art Machinery Co., Wayne Ave. & Berkeley St., Philadelphia, Pa.

Sullebarger Co., E. T., 116 John St., New York, N. Y., and 538 S. Clark St., Chicago, Ill.

SHADING MACHINES AND MEDIUMS

Ben Day, Inc., 118 E. 28th St., New York, N. Y. Craftint Mfg. Co., 210 St. Clair Ave., Cleveland, Ohio

Lanston Monotype Machine Co., 24th at Locust, Phila., Pa.

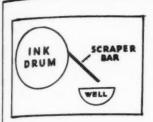
SODIUM SULPHITE ANHYDROUS PHOTO

Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio—1076 W. Division St., Chicago, Ill.

STARTERS AND CONTROLLERS FOR ELECTRIC MOTORS

Monitor Controller Co., Inc., 51 S. Gay St., Baltimore, Md.

AP



ne Sta.

w York.

t., New

Elmora

V York,

ayton.

th St.,

, Long

N. Y.

III.

New go, Ill.

New

Brook-

York,

Ave.,

City,

Ill.

York,

land,

cust,

rook-

land,

RIC

alti-

ER

As EFFICIENT
As it is
SIMPLE!

THE BALDWIN PRESS WASHER for Offset Presses

Hundreds of plants have been effecting economies with this device for years. The majority of them have reordered time and again.

Save up to 65% of wash-up time. Soon pays for itself!

Readily attached. Cannot mar rollers or parts.
Permits speedy wash-up without removing rollers.

FREE TRIAL arranged. Write, mentioning make and model of your pressl

WILLIAM GEGENHEIMER, Inc.

OFFSET PRESS
ENGINEERING

78 ROEBLING STREET
BROOKLYN, N.Y.



COLOR SEPARATIONS •
BLACK AND WHITE •
• COLOR CORRECTED
NEGATIVES READY FOR
THE PHOTO-COMPOSING
MACHINE • POSITIVES •
PROVING • PRESS
PLATES: ALBUMEN DEEP
ETCH • •

TO E GUARANTEE the same confidence and integrity that would be found in your own plant.

WE OPERATE NO PRESSES NOR ARE WE AFFILIATED WITH ANY LITHOGRAPHIC HOUSE

SWART-REICHEL, INC.

Producers of Photo-Lith Work to the Trade
461 EIGHTH AVENUE • NEW YORK

Telephone BRyant 9-1906-7

PACIFIC COAST PHOTO-LITHOGRAPHERS

OUR PHOTO PROCESS DEPARTMENT IS
HEADQUARTERS FOR EQUIPMENT,
PHOTO SUPPLIES AND
CHEMICALS

Our Main Office is in San Francisco, but to render service, complete stocks are carried at our branches in Los Angeles, Portland, Seattle, Salt Lake City, and Berkeley, Calif.

The Use of Your Phone Will Bring One of Our Representatives

PHOTO PROCESS DEPARTMENT

THE CALIFORNIA INK CO., INC. 545 Sansome Street — San Francisco, Calif.

For BETTER Reproduction

LEVY CAMERAS

STANDARD & DARK ROOM TYPES MADE OF WOOD OR METAL

HALF TONE SCREENS
VACUUM PRINTING FRAMES
LENSES - LAMPS

Manufactured by

REPRO-ART MACHINERY CO.
WAYNE AVENUE & BERKELEY STREET
PHILADELPHIA, PA.

APRIL, 1937

79

STEEL GRAINING BALLS

American Graded Sand Co., 2516-18 Greenview Ave., Chicago, Ill.

STRIPPING TABLE

Miles Machinery Co., 18 E. 16th St., New York, N. Y.

Wesel Mfg. Co., 468 Fourth Ave., New York, N. Y., and Scranton, Pa.

Zarkin Machine Co., Inc., 355 E. 27th St., New York, N. Y.

SULPHUR

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

National Offset Supply Co., St. Louis, Mo.

Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.

Sinclair & Carroll Co., Inc., 591 Eleventh Ave., New York, N. Y.

TAX CONSULTANTS

Kromberg & Associates, C. P. A.'s, J., 461 Eighth Ave., New York, N. Y.

Reinish, Samuel S., C. P. A., 2 Lafayette St., New York, N. Y.

TIME CLOCKS—RECORDERS AND STAMPS

International Time Recording Division of International Business Machines Corporation, 270 B'way, New York, N. Y.

Simplex Time Recorder Co., Inc., 50 S. Lincoln St., Gardner, Mass.

TRADE LITHOGRAPHERS

Hinson & McAuliffe Corp., 203 E. 12th St., New York, N. Y.

TRANSFER PAPER

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

McKinley Litho Supply Co., 1600 John St., Cincinnati, Ohio

National Offset Supply Co., St. Louis, Mo.

Siebold, Inc., J. H. & G. B., 47 Watts St., New York, N. Y.

Sinclair & Valentine Co., 11 St. Clair Pl., New York, N. Y.

TRANSFER PROOFS—TYPE IMPRESSIONS

Litho Typesetting Co., 325 W. Ohio St., Chicago, Ill.

Monsen, Thormod & Son, Inc., 730 N. Franklin St., Chicago, Ill.

New York Type Transfer Service, 561 Broadway, New York, N. Y.

TUSCHE

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

Korn, Wm., Inc., 120 Center St., New York, N. Y. Litho Chemical Supply Co., 63 Park Row. New York, N. Y.

National Offset Supply Co., St. Louis, Mo.

TYPEWRITER COMPOSITION

Gallant Service, Inc., 81 W. Van Buren St., Chicago, Ill.

TYPEWRITER RIBBONS

Carbon Paper or Fabric

Remington-Rand, Buffalo, N. Y.

TYPEWRITERS

Coxhead Co., Ralph C., 17 Park Place, New York, N. Y.

International Electric Writing Machines Division of International Business Machines Corporation, 270 B'way, New York, N. Y.

Remington-Rand, Inc., Buffalo, N. Y.

Royal Typewriter Co., 2 Park Ave., New York, N. Y.

Smith & Corona Typewriter, Inc., L. C, Syracuse, N. Y.

Underwood-Elliot-Fisher, 1 Park Ave., New York, N. Y.

VACUUM AND PRINTING FRAMES

Lanston Monotype Machine Co., 24th at Locust, Phila., Pa.

Miles Machinery Co., 18 E. 16th St., New York, N. Y.

Ostrander-Seymour Co., The, 1870 S. 54th Ave., Cicero Station, Chicago, Ill.

Robertson, R. R., 400 W. Madison St., Chicago, Ill. Rutherford Machinery Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Sweigard Ideal Co., 6122 N. 21st St., Phila., Pa. Wesel Mfg. Co., 468 Fourth Ave., New York, N. Y., and Scranton, Pa.

Zarkin Machine Co., 335 E. 27th St., New York, N. Y.

VARNISH

Ault & Wiborg Corporation, 75 Varick St., New York, N. Y.

Carter, C. W. H., 100 Varick St., New York, N. Y. Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Hilo Varnish Co., 42-60 Stewart Ave., Brooklyn, N. Y.

International Printing Ink Corp., 75 Varick St., New York, N. Y.

BETTER WORK LOWER COST

ing Ink

Varick

N. Y. w. New

en St.,

York,

sion of

ration,

York,

acuse,

York,

ocust,

York,

Ave.,

o, Ill.

inting

V. Y.,

York,

New

. Y.

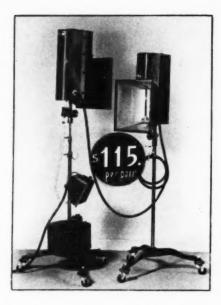
g Ink

klyn,

St.,

ER

Pa.



Especially designed for photo-lithography, Litho-Twins are single arcs for sharp, clean copies and halftones; connected in series for current economy. They produce ample illumination, yet operate without special wiring.

Write today for interesting details.

BEATTIE'S HOLLYWOOD HI-LITE CO.

A Div. of Otto K. Olesen Co.

HOLLYWOOD

CALIFORNIA



"ASCO" (RED) OPAQUE BLOCKS OUT WITH A SINGLE STROKE

Exceptional opacity permits close contact with print.

Ground extremely fine. Flows freely from brush, pen or airbrush. Leaves a thin smooth film that will not crack or chip off.

Test it yourself - Send for a sample.

ARTISTS SUPPLY COMPANY 7610 Decker Ave. Cleveland, Ohio
Ask your dealer for "Asco"

HEADQUARTERS BLUE PRINT PAPER

FOR SILVER PRINT PAPER

PHOTOPRINTS ARTISTS MATERIALS

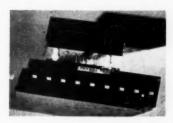
Illustrated Catalogue Upon Request

THE PEERLESS BLUE PRINT CO.

341-347 FIFTH AVENUE NEW YORK, N. Y.

Tel. A5hland 4-6687-8

pH SLIDE COMPARATORS



for CONTROL of FOUNTAIN SOLUTIONS

A simple, practical outfit for controlling the pH of fountain solutions and coating mixtures.

The color standards are enclosed in a Bakelite slide and the pH values are placed above each individual standard.

Determinations are made simply by sliding the color standards in front of the test sample until a color match is obtained and reading the pH from the values on the slide.

The operation of the set is thus very rapid and so simple that any workman can use it.

All Standards guaranteed for 5 years.

MODERN pH AND CHLORINE CONTROL—a 54-page handbook, containing a simple explanation of pH control, its application to numerous problems, and descriptions of our pH, chlorine and phosphate control equipment.

Copy sent sent free on request

W. A. TAYLOR & CO., Inc.

872 LINDEN AVE.,

BALTIMORE, MD.

MACHINE

S PLATES

(WE OPERATE NO PRESSES! for the trade

BLACK WHITE NEGATIVES HALF TONE LINE

WET PLATE DRY PLATE FILM

COLOR **OFFSET PLATES**

PHOTO COMPOSED NEGATIVES

BEN DAY

PHOTO LAC

PHOTO LAC POSITIVES

GRAINED POSITIVES

DOT ETCH POSITIVES

CAMERA

MULTIPLES GLASS 2 OR 200 UP

MACHINE

ZINC 2 OR 1000 UP STAMPS COUPONS **BUTTONS** LABELS PLAYING CARDS, ETC.

COLOR BLACK WHITE STRIPPING ORIGINALS FOR TRANSFERRING

MACHINE DEEP ETCH PRESS PLATES

MACHINE ALBUMEN PRESS PLATES

BLOW UPS

CHICAGO LITHO PLATE GRAINING CO. PHOTO LITHO DIVISION 216 NORTH CLINTON ST., CHICAGO

National Offset Supply Co., St. Louis, Mo.

Roosen Co., H. D., Ft. of 20th & 21st St., Brookply, N. Y.

Siebold, Inc., J. H. & G. B., 47 Watts St., New York, N. Y.

Sinclair & Carroll Co., Inc., 591, Eleventh Ave., New York, N. Y.

Sinclair & Valentine Co., 11 St. Clair Pl., New York, N. Y.

VARNISHES—Overprint

Carter, C. W. H., 100 Varick St., New York, N. Y. Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Gaetjens, Berger & Wirth, Inc., 60 Columbia Heights, Brooklyn, N. Y., and 538 S. Clark St., Chicago, Ill.

Hilo Varnish Corp., 42 Stewart Ave., Brooklyn, N. Y.

Indiana Chemical & Mfg. Company, Indianapolis, New York City, Chicago

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

Sinclair & Carroll Co., Inc., 591 11th Ave., New York, N. Y.

Sinclair & Valentine Co., 11 St. Clair Pl., New York, N. Y.

VIBRATION ABSORBING AND WEAR RESIST-ING FLOORS AND FOUNDATIONS

Korfund Co., Inc., The, 48-15 32nd Place, Long Island City, N. Y.

VOGELTYPE ALIGNING PAPER

Vogeltype Co., 24 Commerce St., Newark, N. J.

WASHUP EQUIPMENT

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Gegenheimer, Inc., Wm., 78 Roebling St., Brooklyn, N. Y.

International Press Cleaner & Mfg. Co., The, 112 E. Hamilton Ave., Cleveland, Ohio.

WATER FOUNTAIN ETCH

Litho Chemical & Supply Co., 63 Park Row, New York, N. Y.

WEAR RESISTING FOUNDATIONS

(See vibration absorbing products)

WET PLATE MATERIALS

Negative Collodion Stripping Collodion Rubber Stripping Solution

Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio—1076 W. Division St., Chicago, Ill.

WHIRLERS

Lanston Monotype Machine Co., 24th St., at Locust St., Philadelphia, Pa.

Lorenz & Co., Inc., Louis, Rose & Duane Sts., New York, N. Y.

Miles Machinery Co., 18 E. 16th St., New York, N. Y.

Ostrander-Seymour Co., The, 1870 S. 54th Ave., Cicero Station, Chicago, Ill.

Wesel Mfg. Co., 468 Fourth Ave., New York, N. Y., Scranton, Pa.

Zarkin Machine Co., Inc., 355 E. 27th St., New York, N. Y.

According to Nicolay and Hay, the secretaries of Abraham Lincoln, he once reprimanded a young officer who had indulged in violent controversy with an associate. Said Lincoln, "The advice of a father to his son, 'Beware of entrance into quarrel, but, being in, bear it that the opposed may beware of thee,' is good, but not the best. Quarrel not at all. No man, resolved to make the most of himself, can spare time for personal contention. Still less can he afford to take the consequences, including the vitiation of his temper and the loss of self-control. Yield larger things to which you show no more than equal right; and yield lesser ones though clearly your own. Better give your path to a dog than be bitten by him in contesting for the right. Even killing the dog would not cure the bite."

A man progresses just as long as he is willing to learn.

Shall I tell you the secret of the true scholar? It is this: Every man I meet is my master in some point and in that I learn from him.—Emerson.

The world gives its admiration not to those who do what nobody else attempts, but to those who do best what multitudes do well.—Macaulay.

I have simply tried to do what seemed right each day as each day came around.—Lincoln.

Ideals are like stars; you will not succeed in touching them with your hands, but like the sea-faring man on the desert of waters, you choose them as your guides, and following them, you reach your destiny.—Carl Schurz.

We do not need higher education so much as we need a compelling force that will make us put into better practice the education we already have.—A. A. Stewart.

Varnishing | Gumming Tinning Roughing Parafining

Locust

, New

York,

Ave.,

N. Y.,

New

es of officer

ciate.

eware

t the

best.

most

Still

g the

Yield

ight;

etter

sting

e the

n.

this:

d in

do

vhat

day

ning

the and

Z.

d a

tice

R

40 YEARS OF SERVICE TO THE TRADE

THE AMERICAN FINISHING CO.

E. S. DE LEON, Prop.

500 S. PEORIA ST.

CHICAGO

GRAINING PRESS PLATES

OFFSET INKS CHEMICALS RUBBER BLANKETS

NATIONAL OFFSET SUPPLY CO.

ST. LOUIS

MISSOURI

GRAINING SERVICE

Zinc. Aluminum. Glass, etc.

PLATE MAKING EQUIPMENT

Vacuum Frames, Whirlers, Contact Printers, Arc Lights, Accurate Cross Rule Form and Negative Ruler, Makeup and Layout Tables and other products.

MADDOX

Lithoplate Graining Corp. 503 S. Jefferson St., Chicago

EVELOPER

DEPENDABLE PRINTING PLATES

IN A FLASH

- * EASILY APPLIED TO ANY METAL
- # CLEAR, SHARP AND ACID RESIST-ANT MAGE
- * STAND UP FOR LONG PRESS LIFE
- * RELEASE EASILY, UNDER HIGH HU-MIDITY FROM BARE GRAIN

FRANCIS G. OKIE

Manufacturer Photo Offset Specialties and Inks 247 S. THIRD STREET PHILADELPHIA, PA.

NEW YORK AGENT: E.T. Sullebarger, Co., 116 John St., New York, N. Y.
CHICAGO AGENT: John A. Sullebarger, 538 South Clark St., Chicago, III.
BALTIMORE AGENT: E. W. Parker, 1207 S. Highland Ave., Baltimore, Md.
CANADIAN AGENT: Manton Bros., 97 Elizabeth St., Toronto, Canada

GRAINING FLINT QUARTZ OF ABSOLUTE

UNIFORMITY TO GRAIN ZINC OR ALUMINUM PLATES

NO. 4/0 TO NO. 3 IN OUR NEW YORK STOCK

WE ARE EXCLUSIVE EASTERN DISTRIBUTORS OF WAUSAU FLINT QUARTZ

NEW ENGLAND QUARTZ CO. OF N.Y. 150 NASSAU STREET **NEW YORK**

> STEP UP YOUR SALES WITH STEP INDEXING >

JOHN M. GETTLER BOOKBINDER

Serving the Lithographer since 1847

SPECIALIZING IN

INDEXING - BOUND BOOKS - CATALOGS LEATHER - CLOTH - PAMPHLET BOOKBINDING

200 VARICK STREET

NEW YORK, N.Y.

TELEPHONE: WALKER 5-0222-0223

KORN'S

LITHOGRAPHIC CRAYONS

- CRAYON PAPER PENCILS
- 66 STICK TUSCHE
- LIQUID TUSCHE
- RUBBING INK TRANSFER INK
- AUTOGRAPHIC TRANSFER INK

MUSIC-PLATE TRANSFER INK

Manufactured by

WM. KORN.

INC.

120 Centre Street

NEW YORK

DESIGNING PEN DRAWING **ENGRAVING** RETOUCHING

154 NASSAU ST. NEW YORK.

NEGATIVES

TINTS AND BORDERS FOR COUPONS, CHECKS, CERTIFICATES.

CONDENSED STATEMENT OF THE CONDITION OF THE

New York Printers & Bookbinders Mutual Insurance Company

147 FOURTH AVENUE : : : : NEW YORK, N.Y.

Statement as of December 31st, 1936

ASSETS		LIABILITIES	
*Bonds and Stocks Bonds and stocks including \$301,346.23 U. S. Government and N. Y. City Municipal bonds	\$568,582.63	Loss Reserve Set aside as required by Law to meet future payments due or which may become due on all accidents which occurred	
Mortgages First Mortgage Loans on improved New York City	64,700.00	prior to date of this state- ment	\$176,839.17
real estate	04,700.00	Estimated amount hereafter	
Real Estate Acquired as a result of fore- closures	32,048.06	payable to New York State Industrial Commissioner, for expenses of administering the	
Cash On deposit with Bankers Trust Co. with exception of		Workmen's Compensation Law	13,966.23
\$25 held in Company's office	34,259.00	Unearned Premium Reserve Pro rata portion of premiums	
Premiums in Course of Coll'n Premiums due the Company on policies just issued, ex- cluding any premiums on policies more than ninety days old	88,964.72	unearned on policies which have not expired—for example—premium for \$100 policy has six months to run; reserve of \$50 is set aside for the unearned portion	124,296.88
Deposit in Mutual Corporations Reinsurance Fund On deposit jointly with moneys of other Mutual Companies to be used in		Other Liabilities Salaries, Taxes, etc., due but unpaid as of date of this statement	5,185.57
event of a catastrophe loss— Total in Fund \$335,001.37	18,857.82	Reinsurance Due	
Interest Accrued, etc. Interest earned to date on		Premiums due to other com- panies for protection pur- chased from them on account	
investments but not yet due and payable	5,875.57	of any one loss we may sustain in excess of \$10,000	1,533.45
\$	813,287.80		\$321,821.30
SURPLUS		\$4	91,466.50

^{*}Bonds and Stocks valued on basis prescribed by the N. Y. Insurance Dept. "On the basis of December 31, 1936 market quotations for all bonds and stocks owned, this company's total admitted assets would be increased to \$848,473.14 and surplus to \$526,651.84"

Reinsured against any one loss, without limit, in excess of \$10,000.00.

Present rate of dividends to policyholders 25%

Workmen's Compensation Insurance at Actual Cost for the Allied Printing Trades

Workmen's Compensation Insurance

INSURE with a financially strong company owned and operated by its policyholders . . . A mutual company specializing in the field of the Allied Printing Trades . . . A company which has paid back more than \$782,000.00 in dividends to its policyholders since its organization in 1914. Present dividend rate 25%

THE COMPANY AT A GLANCE

Premiums Written

Assets

Surplus

1936 \$285,490.98

\$813,287.80

\$491,466.50

Total Premiums Written Since Organization in 1914

\$3,553,056.76



New York Printers & Bookbinders Mutual Insurance Company

147 FOURTH AVENUE : : : : NEW YORK, N.Y.

Telephone TOmpkins Square 6-6530

G. Frederick Kalkhoff, President

C. F. von Dreusche, Manager

THE PHOTO-LITHOGRAPHER'S MANUAL

THE PHOTO-LITHOGRAPHER'S MANUAL is now in type and will soon be lithographed. This $81/2^{\prime\prime}$ x 11" volume has grown in editorial content to a point where it forms an invaluable reference guide to both employer and employee. Copies at four dollars each should be ready for mailing within a few weeks.

The book will contain many chapters on Selling, Production, and Management, and other related data. Among the articles to be included are:

PRODUCTION

The Invention of Lithography
Technical Details of Photo-reproductive
Processes

Fundamentals of Camera Construction and Operation

Chemistry of Photography Making Paper, Film, Dry, and Wet-plate Negatives

Principles of Enlargement and Reduction

Retouching for Color in Lithography
Making an Albumin Plate
Preparing the Plate for the Press
The Deep-etch Plate
Summary of Plate-making Operations
Press-room Problems and How They May
be Overcome
Dot-Etching in Lithography

SELLING

Opportunities for the Salesman in the Photo-lithographic Industry What Should a Salesman Know A Complete Photo-lithographic Sales Campaign The Basis of Successful Selling

The Salesman and the Estimator
Sticking to a Price
Suggestions on How to Build a Price-list
to Serve the Buyer
Quality Advertising Pays Real Dividends

MANAGEMENT

THE PHOTO-LITHOGRAPHER

City and State

Selecting Paper for the Job
Selecting an Ink-supplier
Ink Problems and How They Can be
Overcome

Handling Office Routine in a Lithographic Plant Methods of Compensating Salesmen The Responsibility of the Foreman Building Efficiency and Esprit de Corps

The above is far from a complete list of the valuable articles carried in The Photo-Lithographer's Manual. The order-blank on this page, when returned to the publisher, will insure your receiving copies of this helpful work.

177	6 Broadway, New York
Gent	tlemen:
	Please enter my order for copy (copies) of The Photo-Lithographer
Man	ual.

Street Address

CLASSIFIED ADVERTISING

Rates for this section, 25 cents per line, minimum \$1.50. Count eight words to the line, address to be counted. Remittance must accompany order. Box number addresses are confidential and cannot be revealed. Unless otherwise stated address replies to The Photo-Lithographer, 1776 Broadway, New York, N. Y.

FOR SALE

Need Photo Equipment?

Write for Monthly Bargain List, Cameras, Lenses, Screens, Printing Frames etc. Can save 30% as many items.

W. L. MOORE

4829 Woodward - Detroit

The advertisers need your patronage to warrant continuance of their advertising in The Photo-Lithographer.

In turn, generous advertising support assures the growth of your magazine, devoted to helping you by disseminating news and valuable general information concerning your field.

HARRIS OFFSET PRESS — S-5-L, 22x34; Suction Pile Air Feeder; Chute Delivery.

HARRIS OFFSET PRESS — S-8-L, 28x42; Suction Pile Air Feeder; Positive Chain Delivery.

MULTILITH, 11x17; Suction Pile Feed.

Box A-2.

HARRIS PRESS, 22 x 34 full coverage. Friction Feed, Chute delivery. First class operating condition and may be seen running at any time. New York City. Box A-3.

WEBENDORFER OFFSET PRESS, 14x20, late model. William Gegenheimer, 78 Roebling St., Brooklyn, N.Y.

SITUATIONS WANTED

SALESMAN, married Protestant, thirty-six years old, some accounts—capable estimating, desires part inside and part selling connection — many years' experience estimating, selling and layout, black and white and spot color photo lith work. Go anywhere for opportunity. Box M-17

DESIGNER — Pen drawing, engraving, retouching negatives for commercial work and labels, for photo-reproduction work, experienced and reliable. Box M-9.

LITHOGRAPHIC EXECUTIVE, thoroughly qualified on all phases of reproduction, can perform every operation in a litho plant from camera and plate making to edition off the press. Technical knowledge and engineering training. Will consider straight salary or salary and interest. Box A-1.

YOUNG MAN complete experience plates, camera and stripping. Capable good line work and fine halftones. Some color work. Thoroughly able to handle small shop. Box No. A4.

HELP WANTED

INSTRUCTOR wanted, reliable and fully qualified to teach offset camera and plate making. Trade school in middle west. Position open March 15, attractive year round proposition. Write particulars and salary expected. Box M-14







ADVERTISERS IN THIS ISSUE

Agfa Ansco Corp.	. 2	Marquardt & Co		
American Finishing Co., The		Merck & Co., Inc.		
American Graded Sand Co		Mille, W. P.		
American Type Founders Corp.		Minnesota Mining & Mfg. Co.		
Artists Supply Co		Moore, W. L.		
Baum, Russell Ernest	. 77	N 100 . 0 . 1 0		
Beattie's Hollywood Hi-Lite Co.		National Offset Supply Co		
Bingham Sons Mfg. Co., Sam'l		New England Quartz Co		
Bulkley, Dunton & CoBack C		New York Printer's & Bookbinder's Mutual In-		
Buikley, Dunton & CoBack C	Over	surance Co8 Norman-Willets Co		
California Ink Co.	79	Troiman- whiels Co		
Cantine Co., Martin, The		Okie, Francis G		
Carter, C. W. H.		Ostrander-Seymour Co.		
Chicago Litho Plate Graining Co.		Contanuel Seymour Co		
Chillicothe Paper Co		Paasche Airbrush Co		
Cleanprint, Inc.		Peerless Blue Print Co		
Columbia Offset & Reproduction Corp.		Phillips & Jacobs.		
Coxhead Corporation, Ralph C		Photo-Litho Plate Graining Co.		
Craftsmen Line-Up Table Corp		Pitman Company, Harold M.		
Crescent Ink & Color Co. of Penna.				
		Polygraphic Co. of America, Inc		
Eastman Kodak Company	31	Rapid Roller Co3		
Fuchs & Long Mfg Co. Div. Conoral Ptg Ink Com	90	Rathburn & Bird Co., Inc., The.		
Fuchs & Lang Mfg. Co., Div. General Ptg. Ink Corp.	38	Reliable Lithographic Plate Co., Inc.		
Gaetjens, Berger & Wirth, Inc.	57	Repro-Art Machinery Co		
Gegenheimer, William, Inc		79 Roberts & Porter, Inc.		
		Corp.		
Hammer Dry Plate Co.				
Harris-Seybold-Potter Co.	4	Siebold, Inc., J. H. & G. B.		
Henschel Mfg. Co., C. B.		Sinclair & Carroll Co		
Hilo Varnish Corporation		Sinclair & Valentine CoInside Back Co		
Hinson, McAuliffe Corp.	67	Sullebarger, E. T., Co		
Hoe, R. & Co., Inc.	1	Superior Printing Ink Co., Inc		
Holland, Thor		Swart-Reichel, Inc.		
Hunt Co., Philip A.	62			
Tille de Table Diese Control Co	000	Taylor & Co., W. A., Inc.		
Illinois Litho Plate Graining Co	77 9	Trussell Mfg. Co32-C		
International Paper Co		Vulcan Proofing Co		
International Press Cleaner & Mfg. Co	65	vuican Froning Co		
Korn, William, Inc	83	Webendorfer-Wills Co., Inc.		
		Wesel Mfg. Co		
Lanston Monotype Machine Co		Western Litho Plate Graining Co		
Litho Equipment & Supply Co		"Where-to-Buy-It"64		
Lithographic Plate Graining Co	65	Willard Mfg. Co		
Machath Ara Lamp Co	5.4	Zarkin Machine CoInside Front Co		
Macbeth Arc Lamp Co	54	Zarkin Wachine CoInside From Co.		
Maddox Lithoplate Graining Co	83	Zeiss, Carl		

中村村



... 11 --- 83 -- 5 -- 87

... 83 ... 83

.84-85 ... 69

53 ... 81 ... 71 ... 75 ... 45 ... 56

..32-D

... 73 ... 58 ... 79 ... 46

... 32

.. 42

Cover

.. 73 .. 58 .. 79

2-C-D

.. 50 .. 77

64-82

. 6

Cover

HER

k

has met with phenomenal

SUCCESS HAVE YOU TRIED IT?

. . delay no longer its use assures customer approval

Sinclair and Valentine Co.

Makers of

PULP AND DRY COLORS VARNISHES AND DRYERS



FOR ALL PRINTING PURPOSES

Main Office and Factory

603-611 W. 129th STREET

NEW YORK, N. Y.

Service Branches

BALTIMORE BOSTON

ALBANY NASHVILLE JACKSONVILLE DALLAS

CHICAGO SEATTLE

MAMI DAYTON LOS ANGELES

PHILADELPHIA NEW ORLEANS SAN FRANCISCO COMPLETE MILL AGENTS FOR



BECKETT PAPERS

BUCKEYE COVER
BUCKEYE TEXT
BECKETT COVER
BECKETT TEXT
OHIO COVER
BECKETT OFFSET

We Carry Complete Stocks of All Colors and Finishes

BULKLEY, DUNTON & COMPAN

295 MADISON AVE.

Telephone CAledonia



NEW YORK,

5 - 5260 to 5268